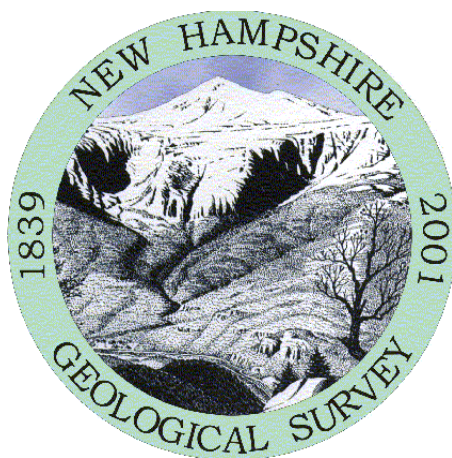


New Hampshire Groundwater Level Monitoring

July, 2021



**New Hampshire Geological Survey
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095**

August 4, 2021

GROUNDWATER CONDITIONS SUMMARY

According to the [Northeast Regional Climate Center](#) (NRCC) at Cornell University, precipitation for the month of July for a large swath of the state exceeded 150% of normal precipitation, with much of the area exceeding 200%. However, parts of northern New Hampshire are near of just under 100% of normal precipitation. Figure 1 shows the distribution of percent precipitation and water levels in the well network.

According to the [National Drought Management current conditions web page](#) all of southern and much of central New Hampshire (66% of the state) are not in a classified drought condition (see Figure 2.) Abnormally Dry (D0), Moderate Drought(D1) and Severe Drought(D2) occupy the remaining northern 34% of the state.

The overall groundwater picture for the month is mixed, with some groundwater levels being classified as high and others as low. Additionally, the only geographical pattern to the groundwater levels is that there seems to be a trend along the New Hampshire longitudinal spine showing areas of greater recovery; however, there are exceptions to this pattern. Of the wells analyzed for statistics, 7 wells are showing high levels this month while 6 wells have below normal or low groundwater levels. For wells that don't have full statistics calculated, 3 of the 4 wells are below last year's monthly groundwater level.

Figures 1 and 2 show the monthly status of groundwater levels for both bedrock and overburden wells in the network. Only wells with a period of record (POR) 10 years or more are placed within statistical categories of low through high (symbols red through blue, respectively). Bedrock wells are installed into bedrock and overburden wells are installed in the unconsolidated materials above bedrock.

The New Hampshire Geological Survey's groundwater monitoring network (Figures 1 and 2) currently includes 11 bedrock and 20 overburden observation wells, all of which are measured monthly by hand. Using the monthly hand readings, monthly averages and percentile statistics were calculated and are summarized in Figures 1 and 2, the following hydrographs*, and in Table 1.

*The hydrographs show the following data over a period of 12 months: (1) monthly groundwater depths in red, (2) the monthly average over the period of record (POR) of the well in black, and (3) color-coded statistical ranges over the POR of the well. Note the POR is listed below each month's column on the chart and reported as the number of measurements for that respective month. This might include multiple readings in the same month and does not include any gaps in data so therefore may not represent a continuous period.

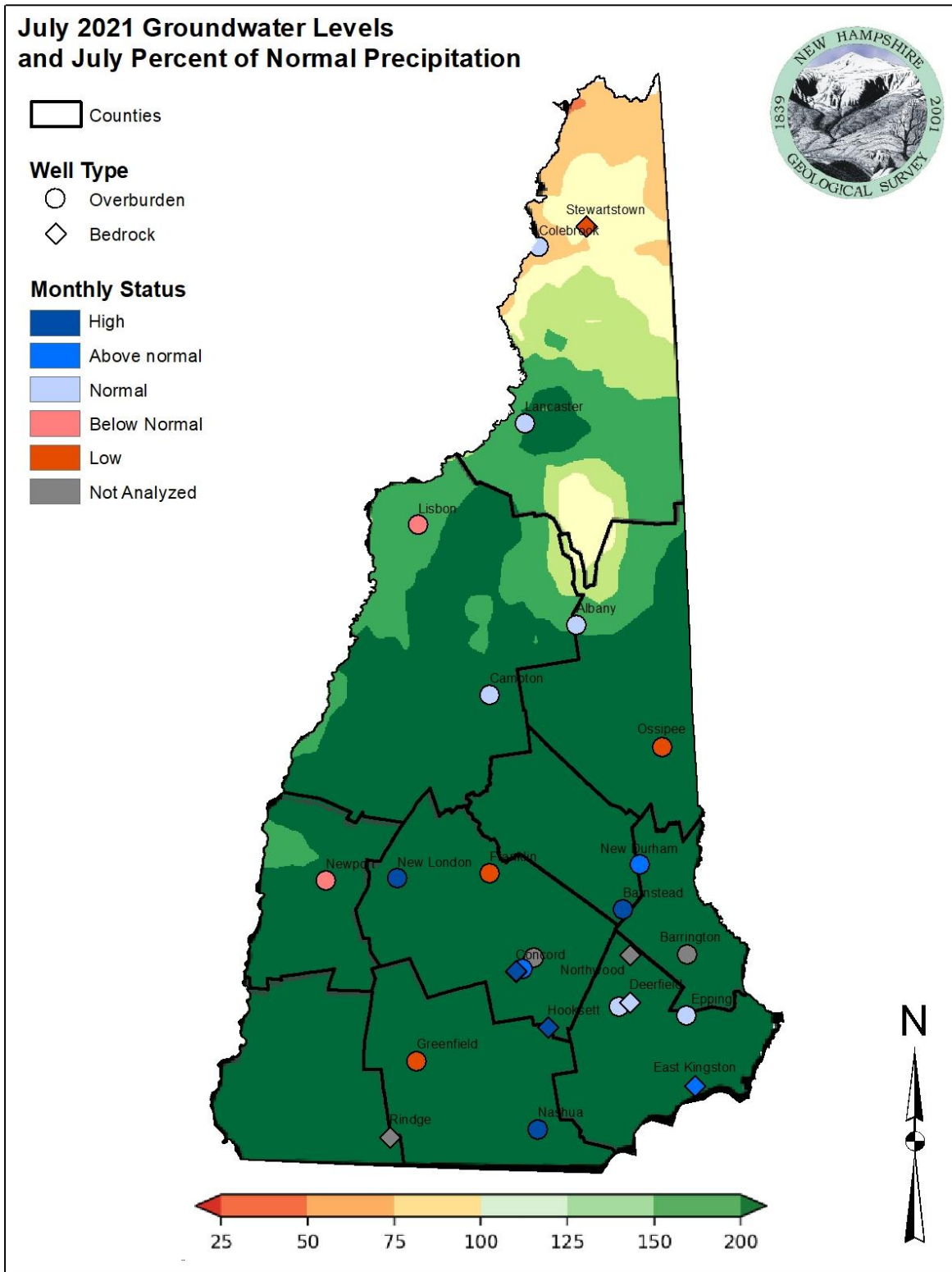


Figure 1. Groundwater Monitoring Network showing groundwater levels relative to statistical envelopes calculated over each well's period of record (POR) and percent normal precipitation map for July, 2021 ([Northeast Regional Climate Center](#)).

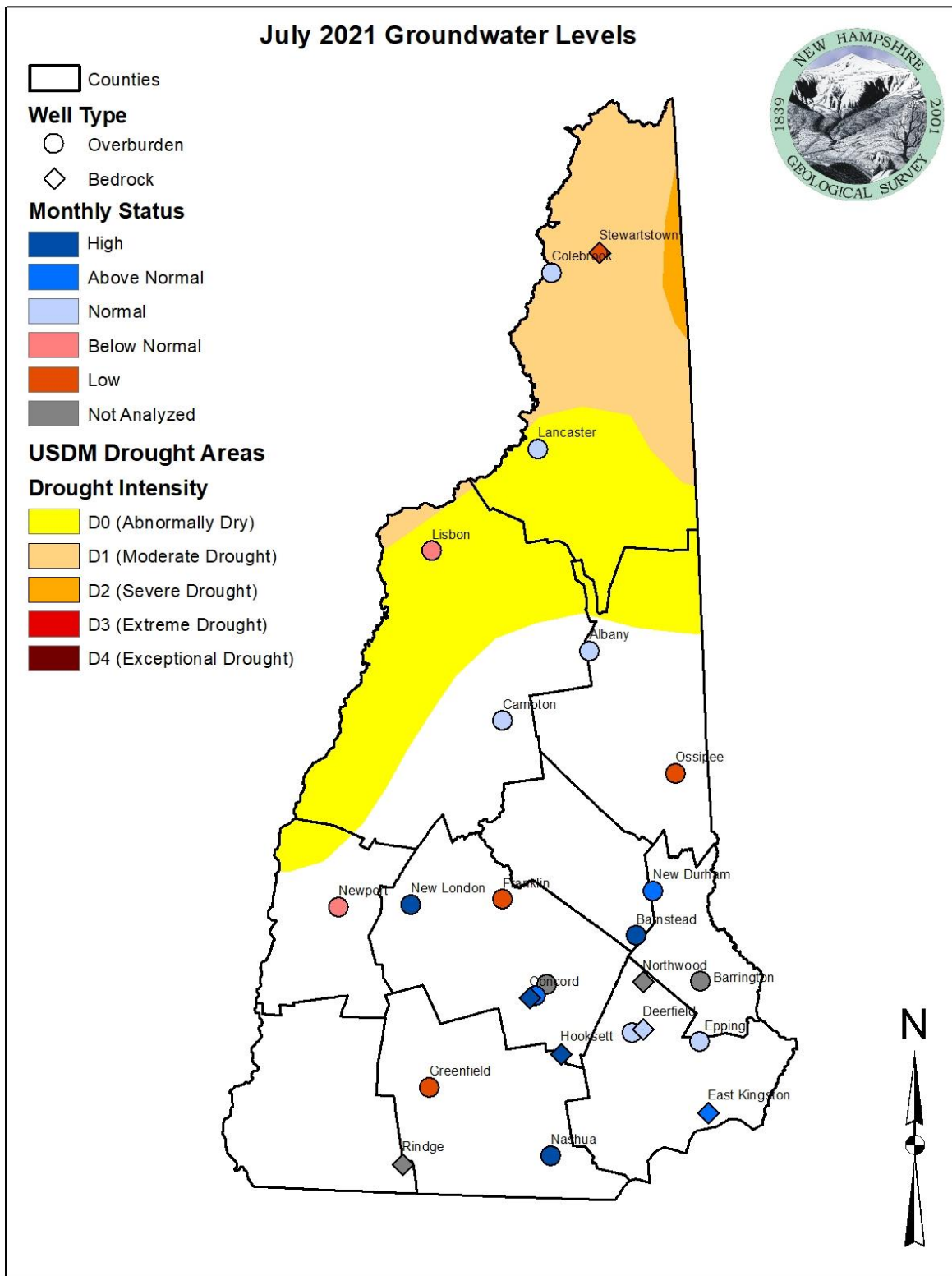
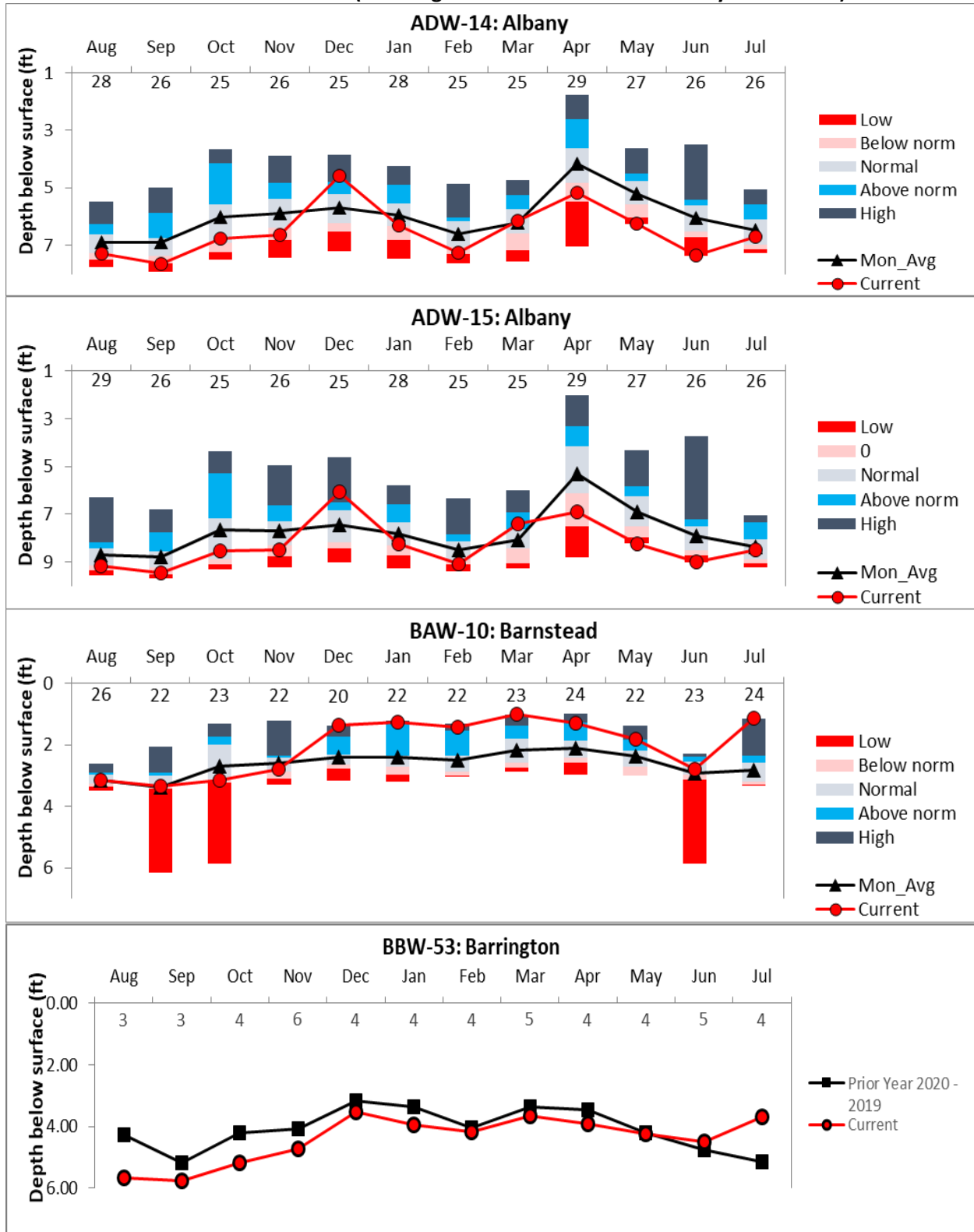


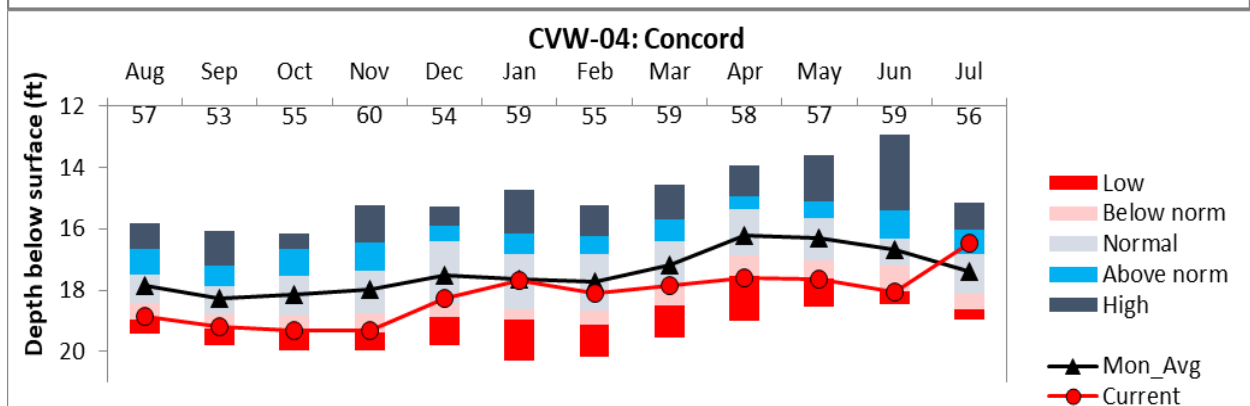
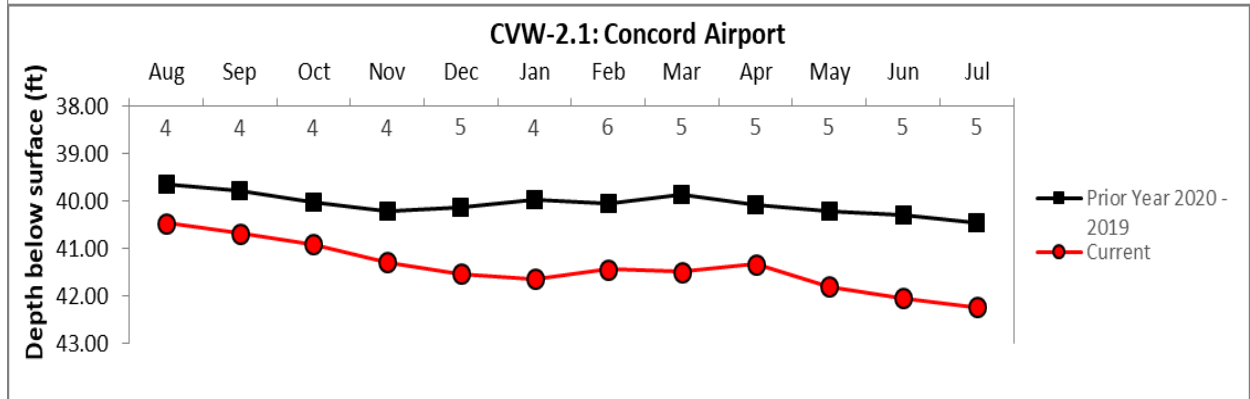
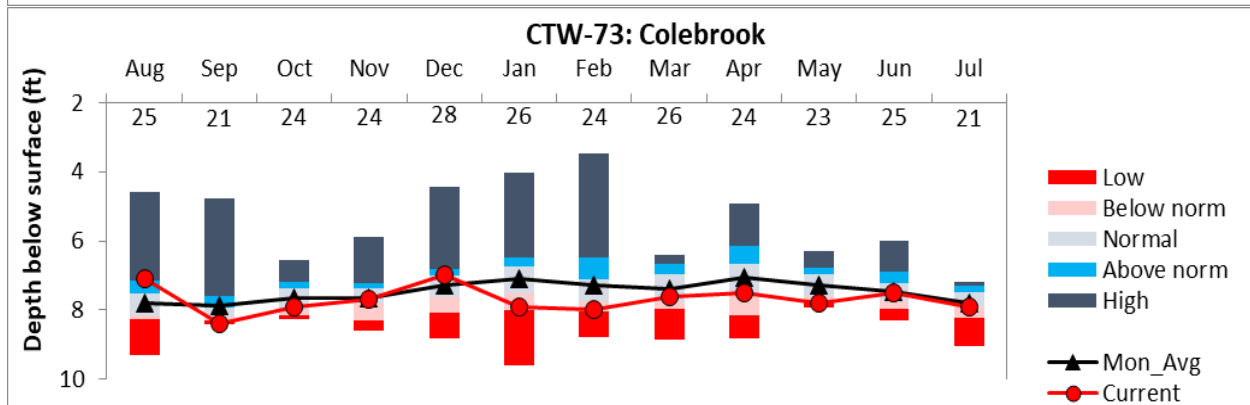
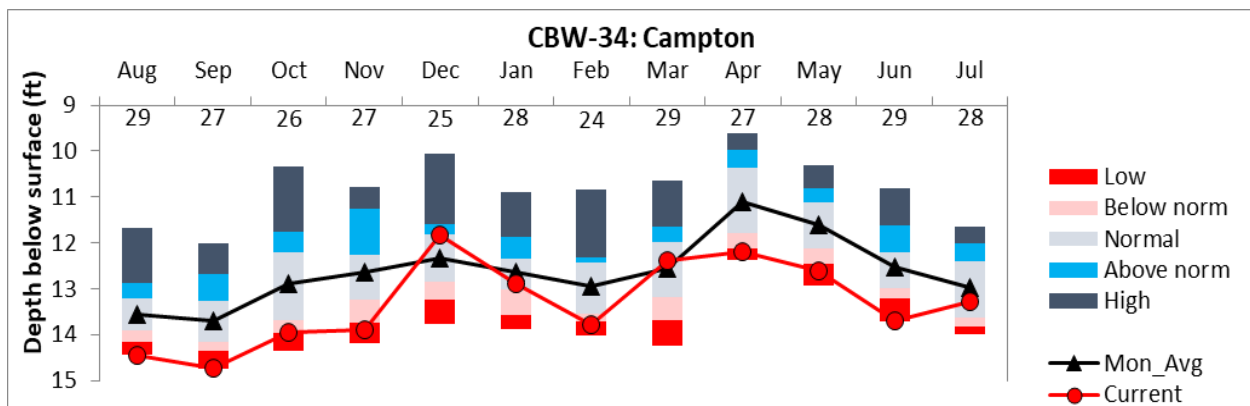
Figure 2. Groundwater Monitoring Network showing groundwater levels relative to statistical envelopes calculated over each well's period of record (POR) and drought areas according to data released by the [U.S. Drought Monitor](#) on July 29, 2021.

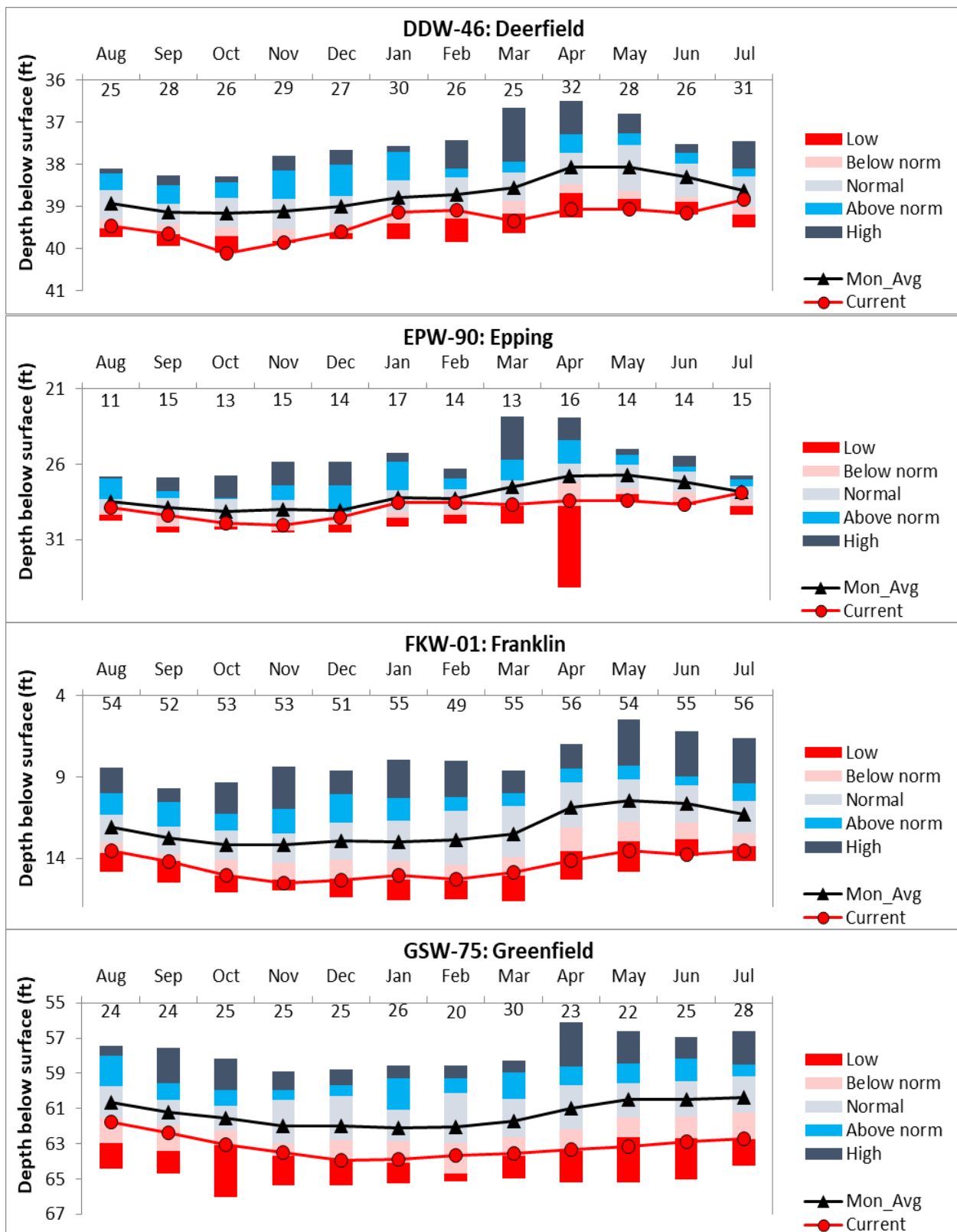
Table 1. Summary of groundwater levels sorted by region (dark blue – high, blue – above normal, light blue – normal, pink – below normal, red – low).

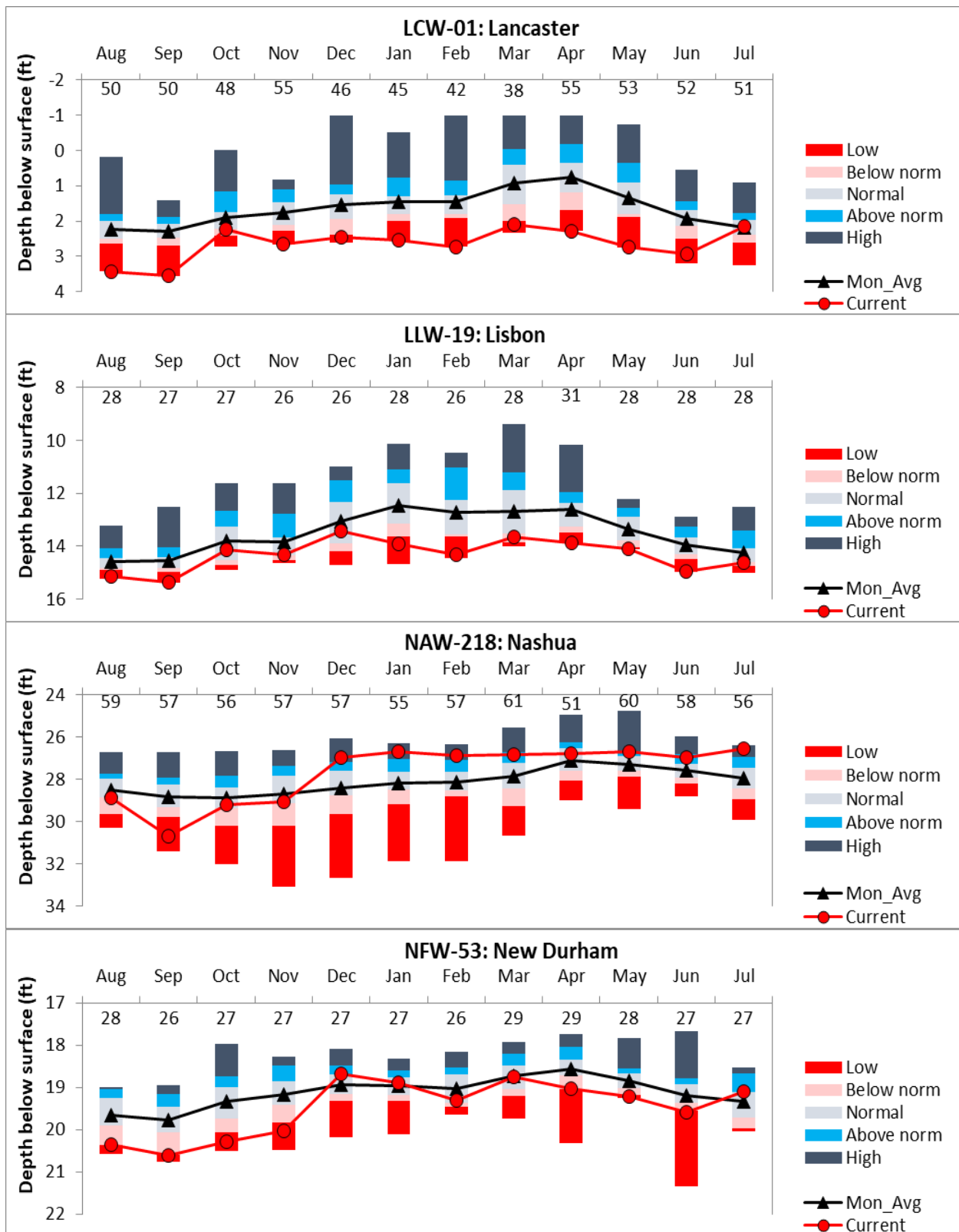
Well	Town	Well type	Screen/ open Interval (ft)	Depth to Water (ft)	Monthly Average (ft)	Current Status	Departure from Avg. (ft)	Change since last month (ft)
ADW-14	Albany	Overburden	77.5-79.5	6.7	6.47	Normal	-0.23	0.66
ADW-15	Albany	Overburden	16-18	8.5	8.36	Normal	-0.14	0.5
BAW-10	Barnstead	Overburden	23-25	1.13	2.83	High	1.7	1.67
BBW-53	Barrington	Overburden	21-23	3.69		Not Analyzed		0.8
CBW-34	Campton	Overburden	21-23	13.27	12.98	Normal	-0.29	0.43
CTW-73	Colebrook	Overburden	105-107	7.9	7.81	Normal	-0.09	-0.4
CVW-02.1	Concord	Overburden	59.8-61.8	41.92		Not Analyzed		0.31
CVW-04	Concord	Overburden	25-27	16.45	17.41	Above norm	0.96	1.61
DDW-46	Deerfield	Overburden	59.8-61.8	38.82	38.62	Normal	-0.2	0.33
EPW-90	Epping	Overburden	39.45-40.7	27.91	27.85	Normal	-0.06	0.73
FKW-01	Franklin	Overburden	45.5-47.5	13.55	11.32	Low	-2.23	0.25
GSW-75	Greenfield	Overburden	35.8-37.8	62.73	60.38	Low	-2.35	0.18
LCW-01	Lancaster	Overburden	28-30	2.16	2.19	Normal	0.03	0.78
LLW-19	Lisbon	Overburden	49.8-52.3	14.63	14.23	Below norm	-0.4	0.33
NAW-218	Nashua	Overburden	66-68	26.54	27.97	High	1.43	0.44
NFW-53	New Durham	Overburden	28-30	19.09	19.34	Above norm	0.25	0.5
NLW-01	New London	Overburden	40-42	5.98	10.12	High	4.14	3.03
NPW-03	Newport	Overburden	40.5-42.5	6.78	6.52	Normal	-0.26	0.61
NPW-06	Newport	Overburden	58-60	7.36	6.62	Below norm	-0.74	0.59
OXW-38	Ossipee	Overburden	0-22.55	36.42	35.02	Low	-1.4	-0.14
CVWB-01	Concord	Bedrock	470-480	20.84	25.72	High	4.88	3.64
CVWB-02	Concord	Bedrock	0-315	13.8	20.27	High	6.47	4.61
DDWB-01	Deerfield	Bedrock	0-300	17.05	17.09	Normal	0.04	-0.02
EAWB-01	East Kingston	Bedrock	463-473	22.01	23.21	High	1.2	1.26
EAWB-02	East Kingston	Bedrock	0-323	21.29	22.49	Above norm	1.2	1.19
HTW-05	Hooksett	Bedrock	0-102.7	46.32	48.12	High	1.8	2.55
NWWB-01	Northwood	Bedrock	0-130	2.61		Not Analyzed		2.15
RGWB-01	Rindge	Bedrock	391-401	14.25		Not Analyzed		0.61
RGWB-02	Rindge	Bedrock	0-285	16.96		Not Analyzed		0.62
SOWB-01	Stewartstown	Bedrock	443-453	17.4		Not Analyzed		-2.15
SOWB-02	Stewartstown	Bedrock	0-303	25.1	22.92	Low	-2.18	-2.7

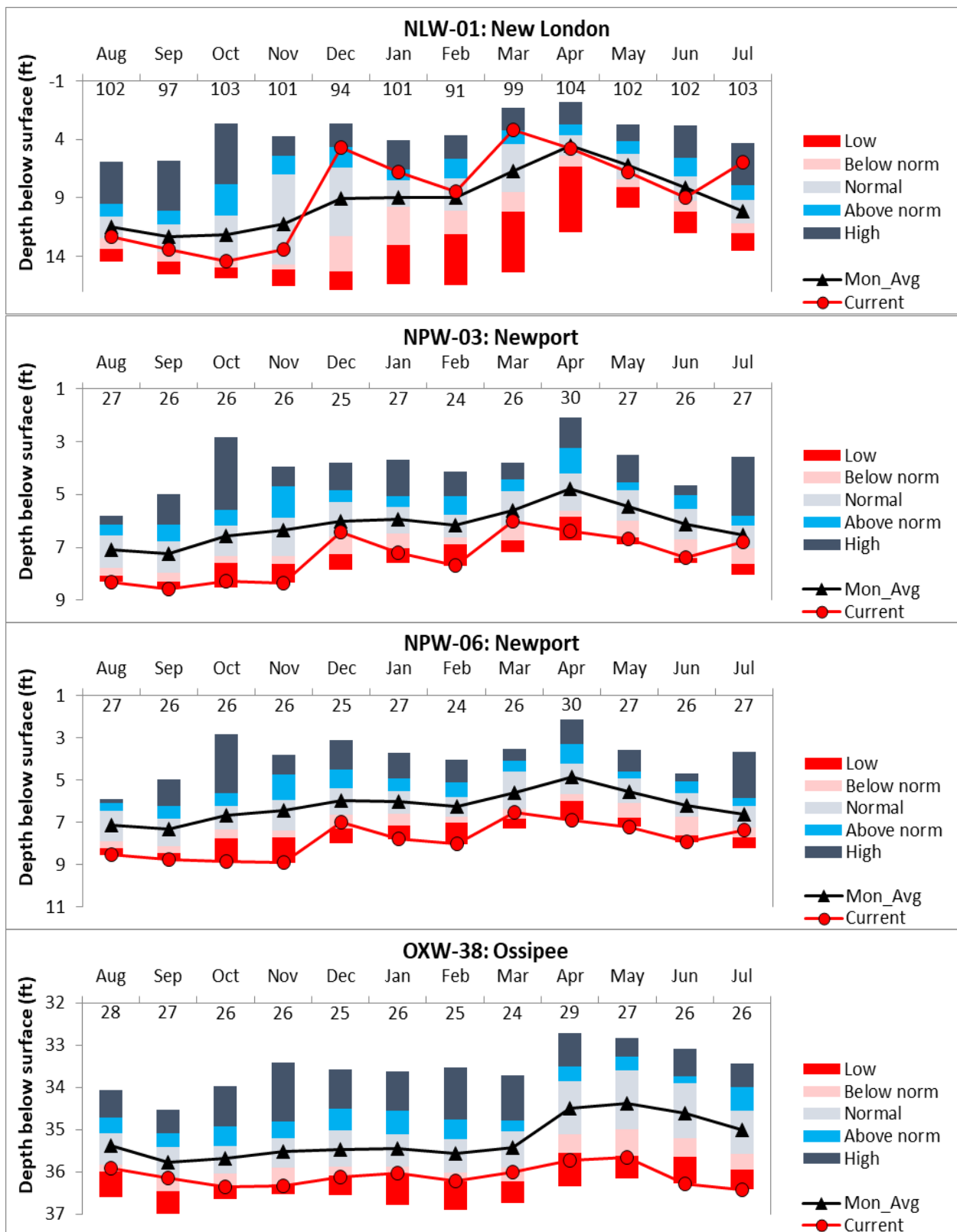
OVERBURDEN WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)



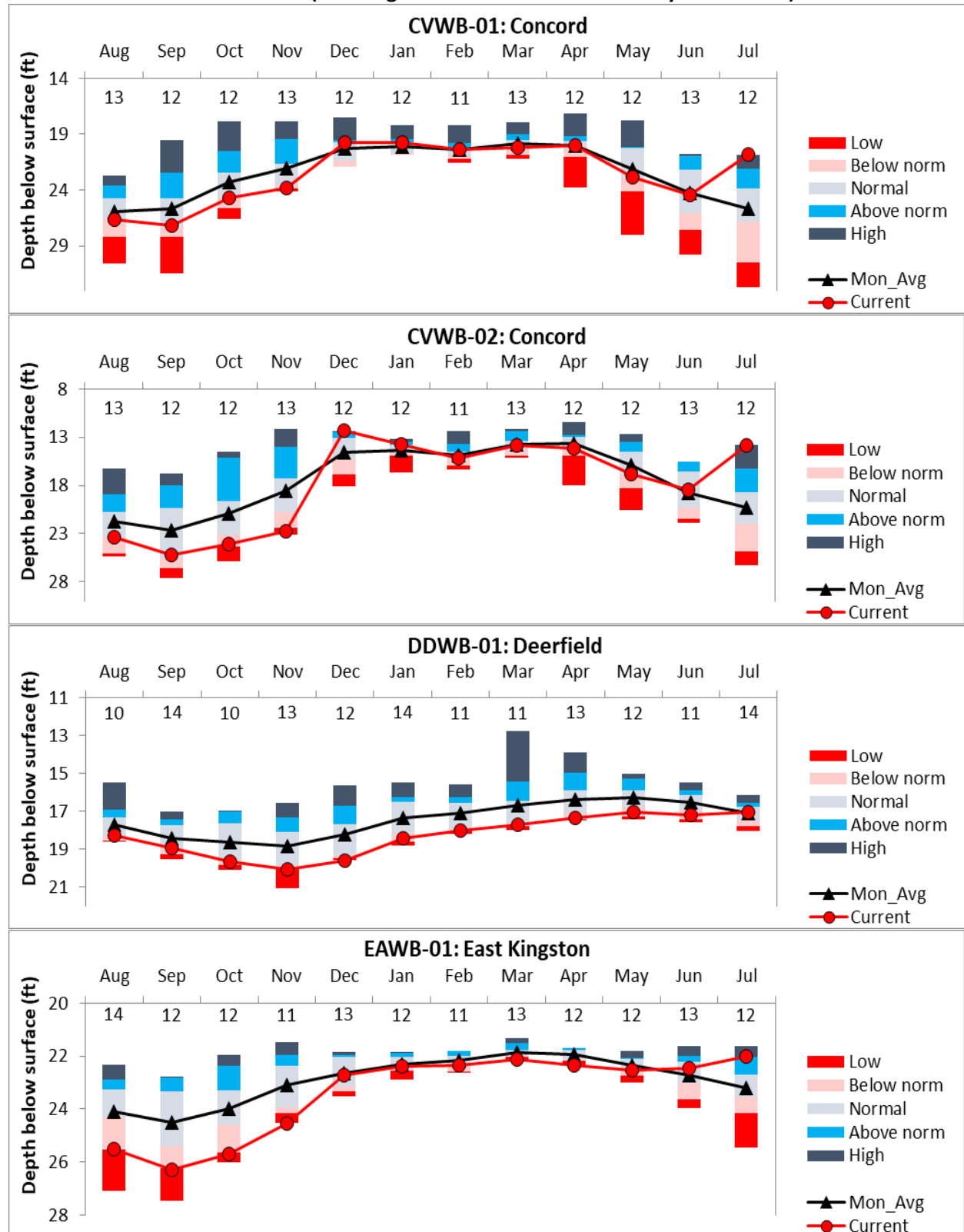


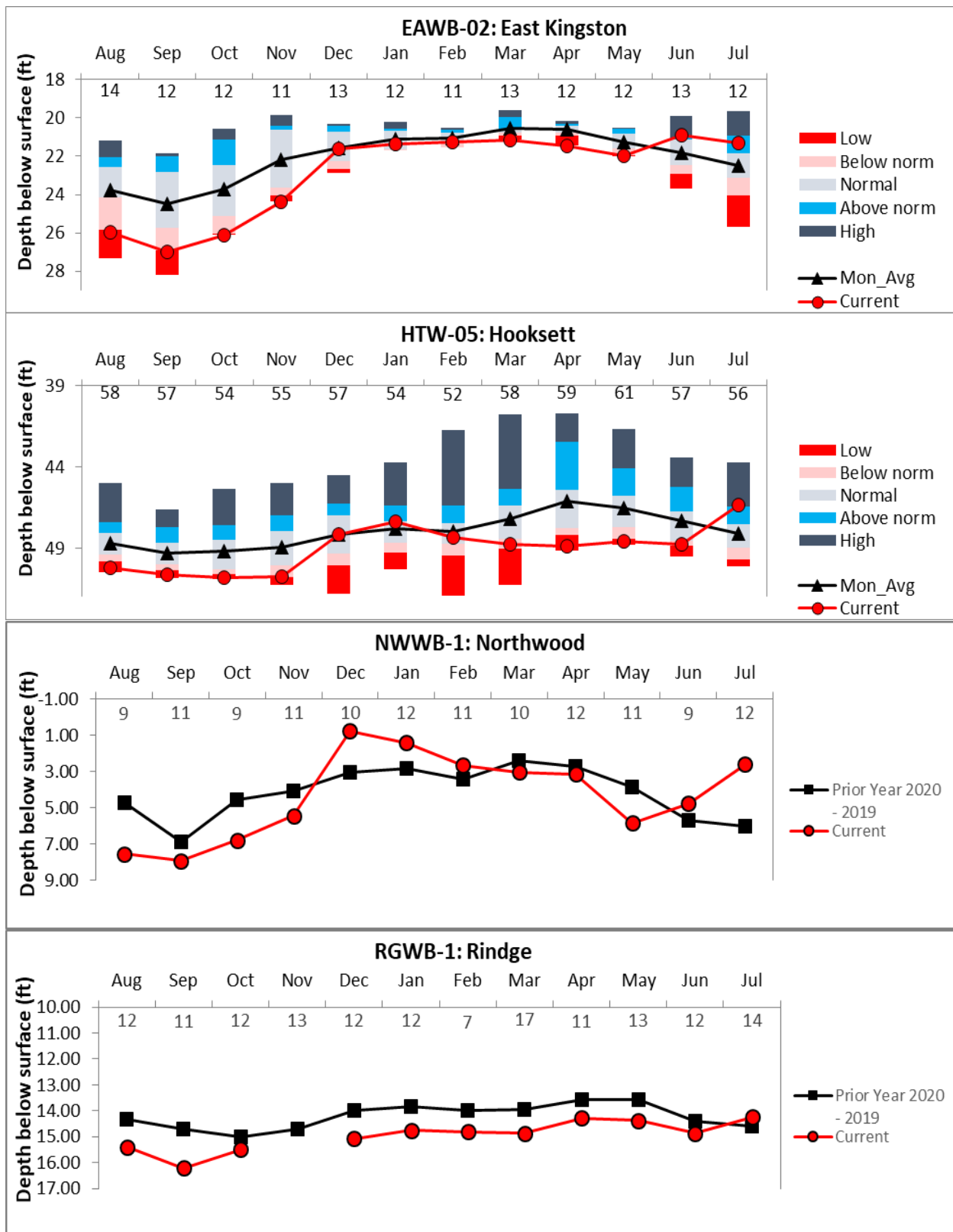


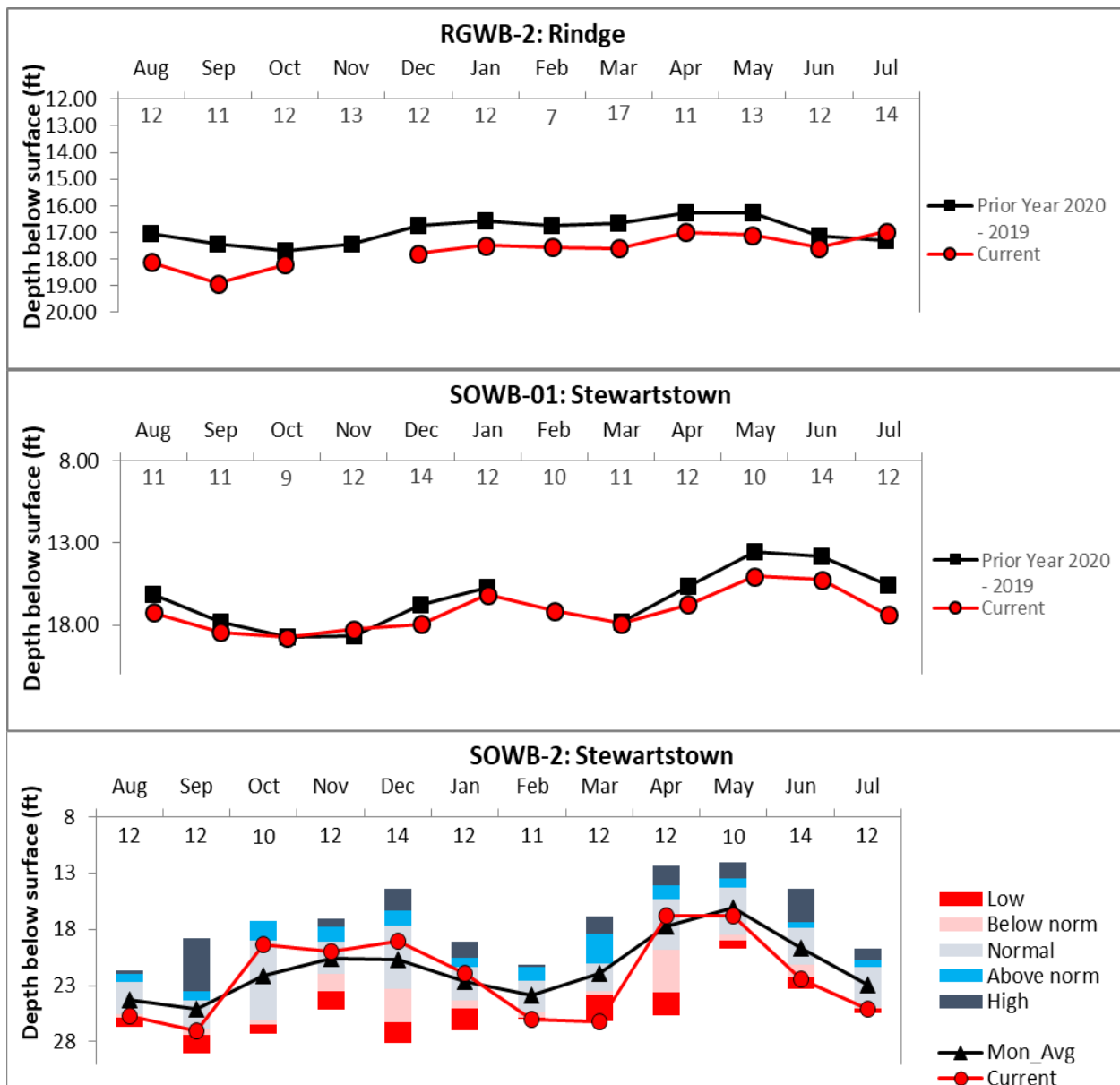




BEDROCK WELL HYDROGRAPHS (Showing statistics for wells with ≥ 10 years of data)

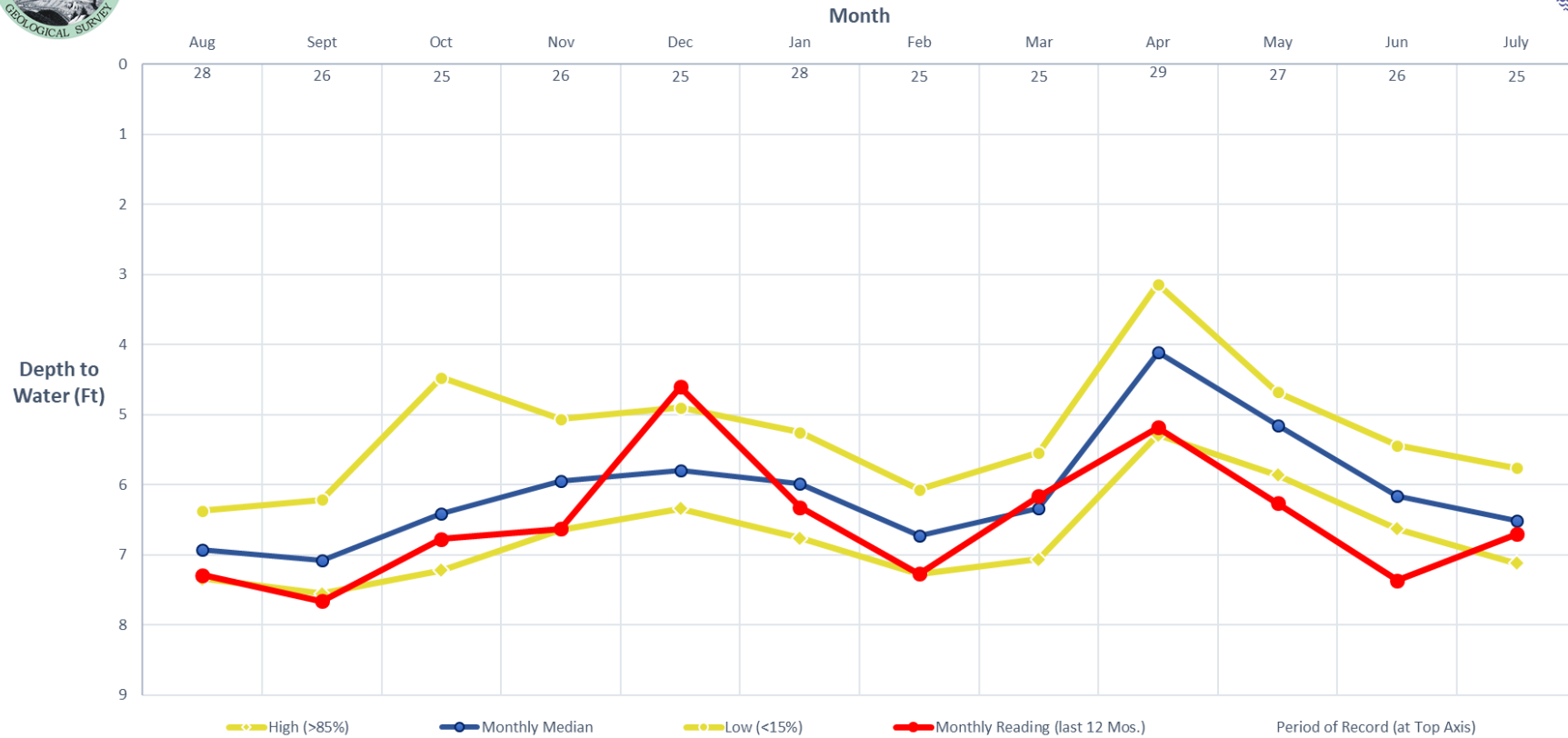








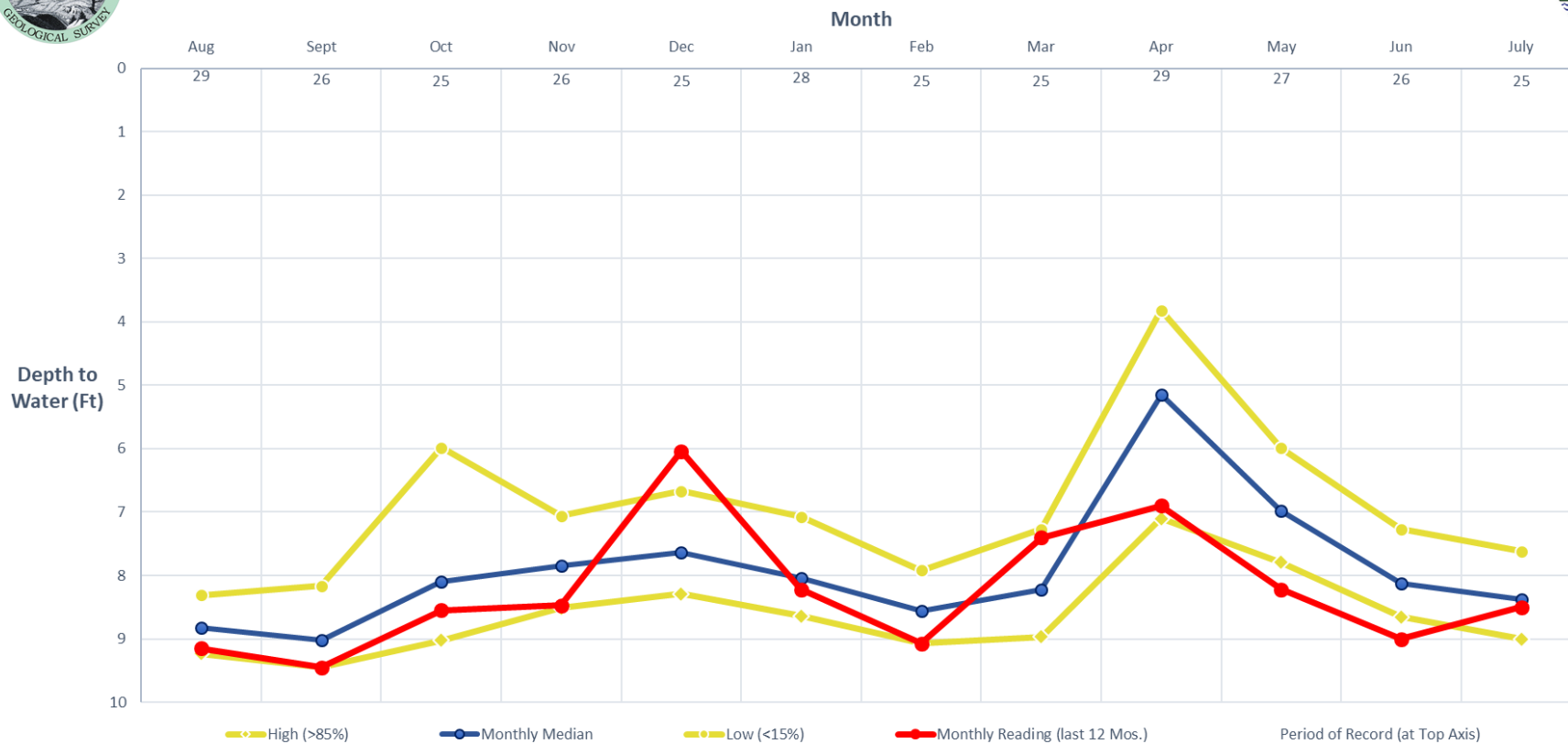
Well ADW-14 - Deep Overburden Well Albany, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



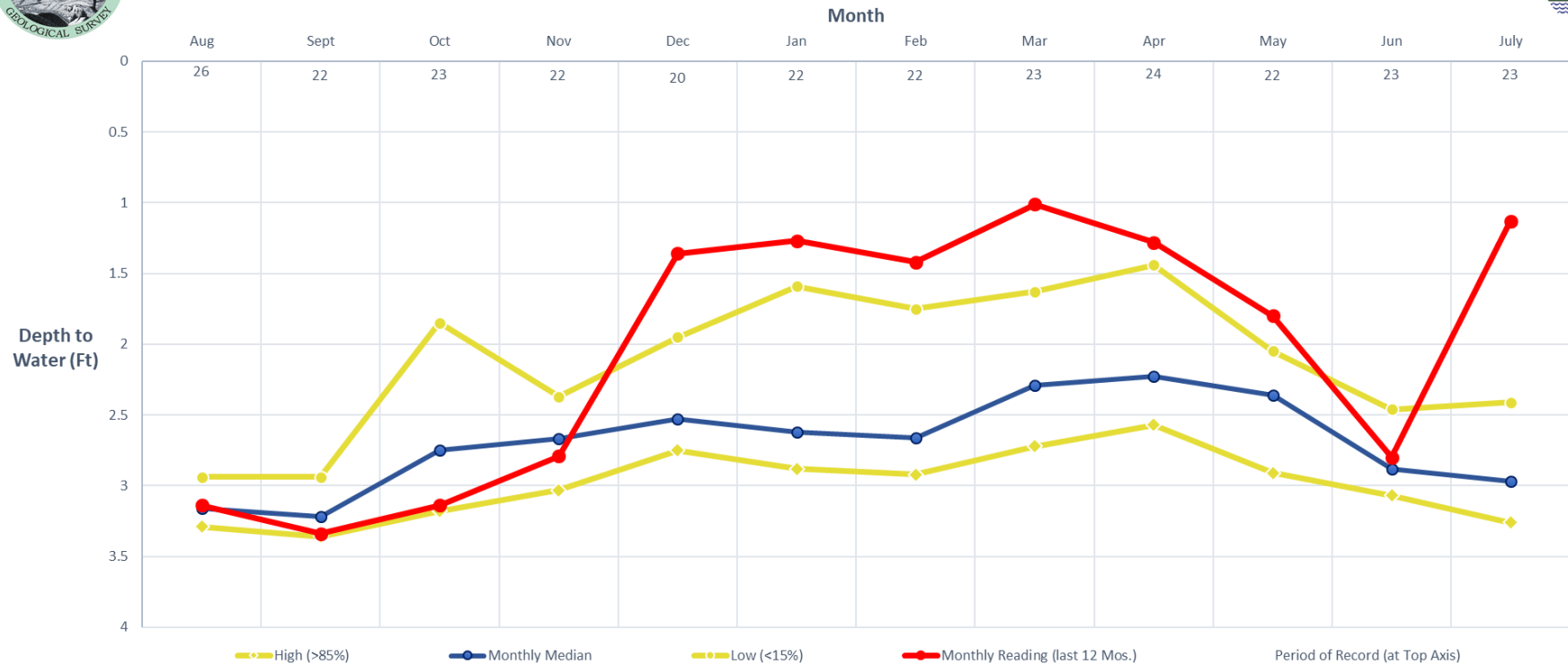
Well ADW-15 - Shallow Overburden Well Albany, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



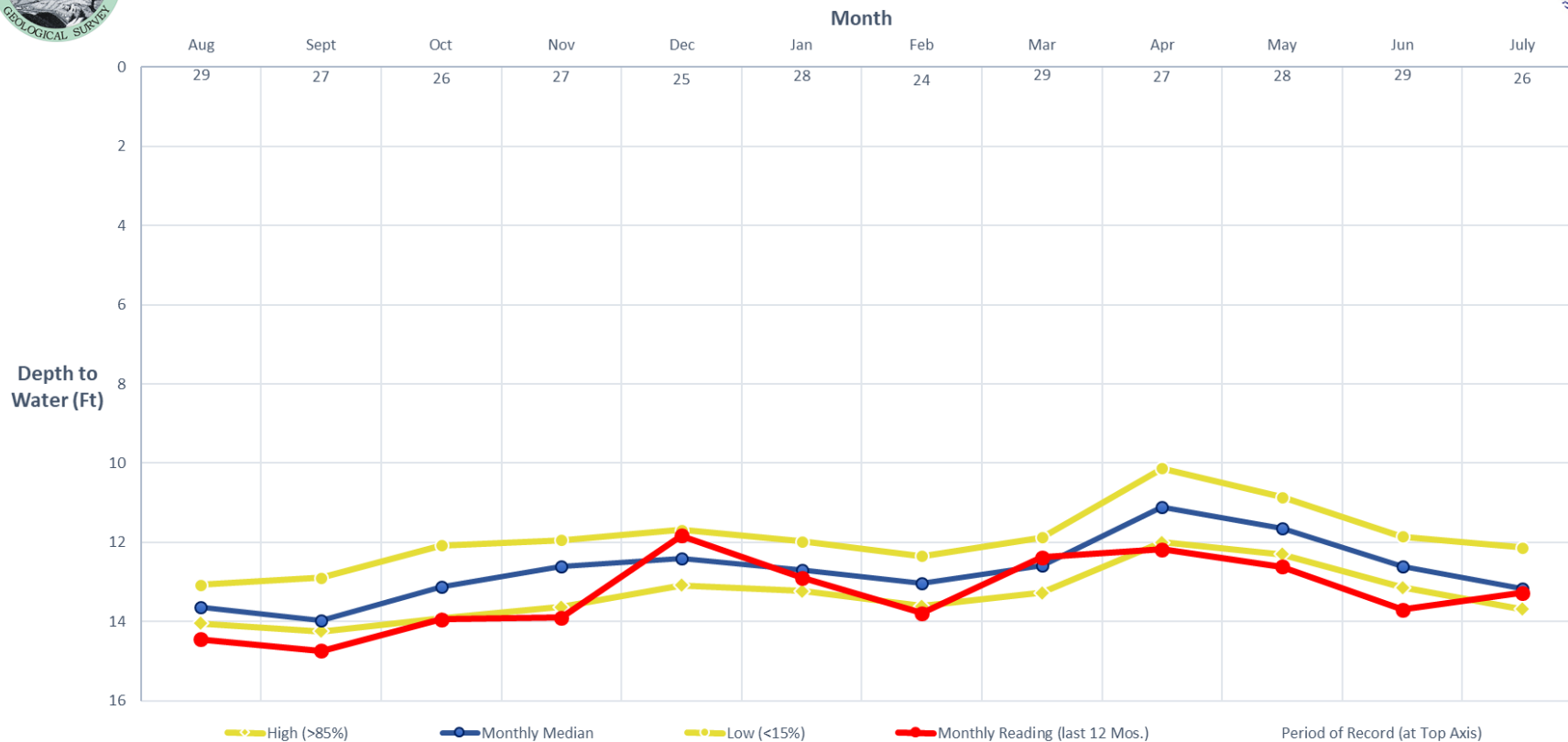
Well BAW-10 - Overburden Well Barnstead, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



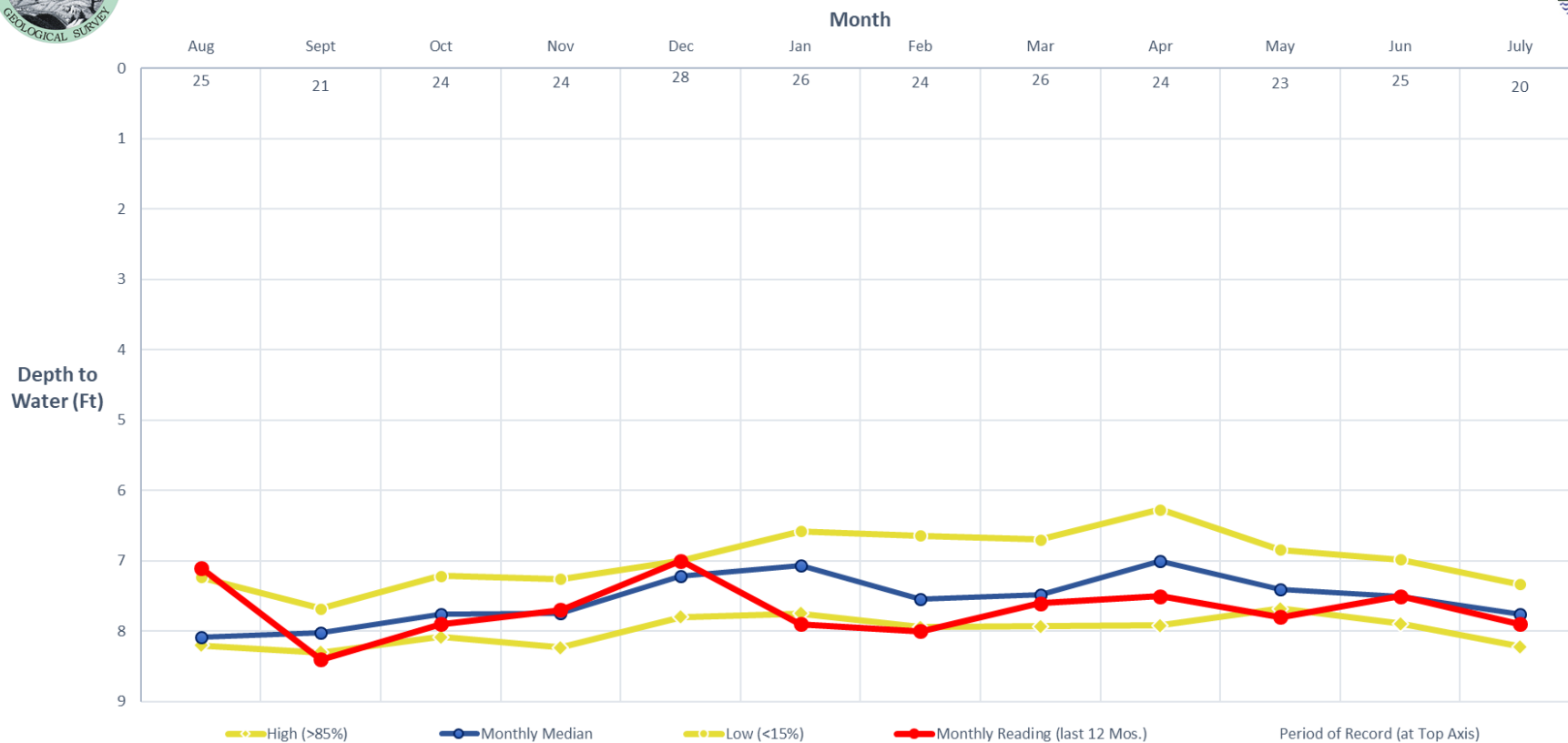
Well CBW-34 - Overburden Well Campton, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



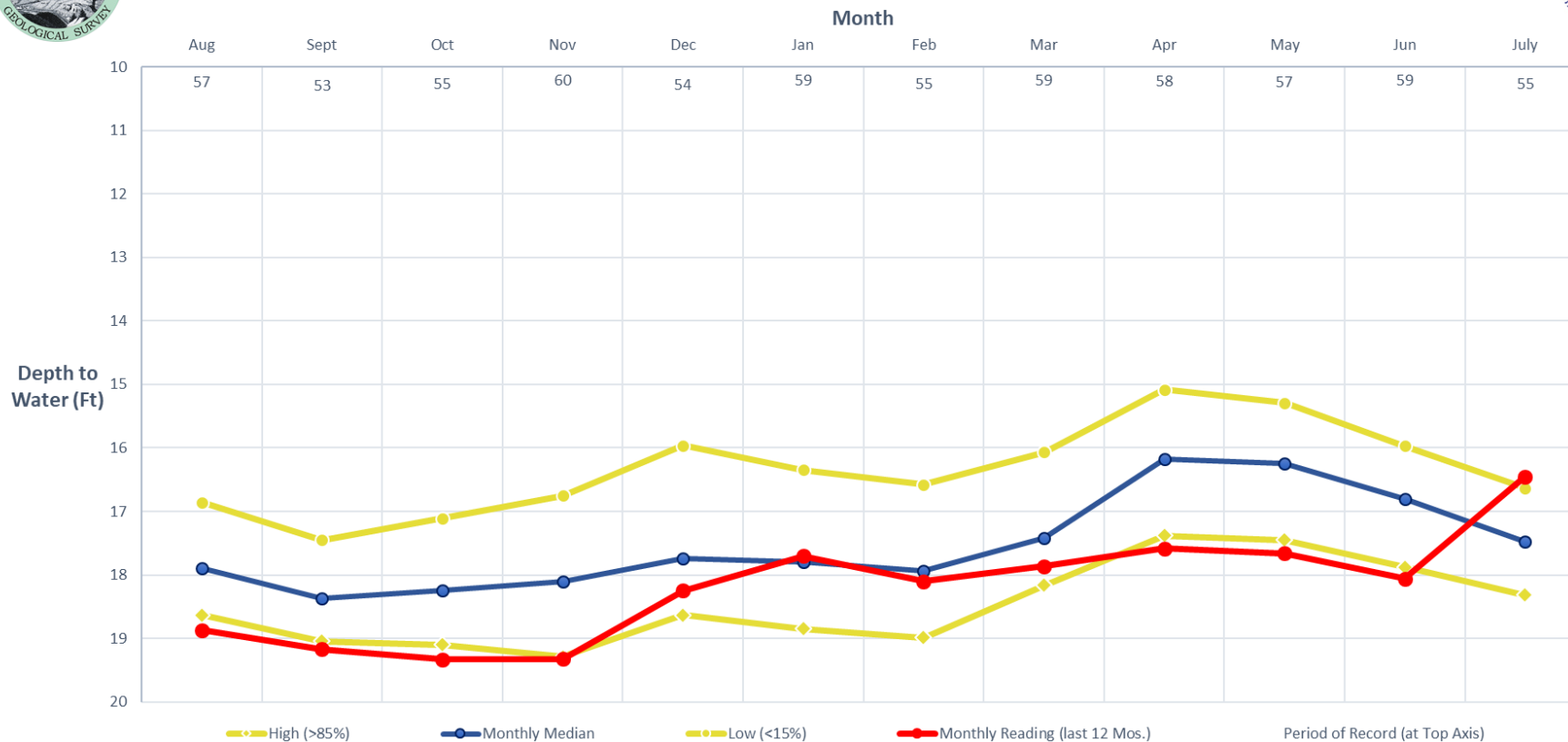
Well CTW-73 - Overburden Well Colebrook, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



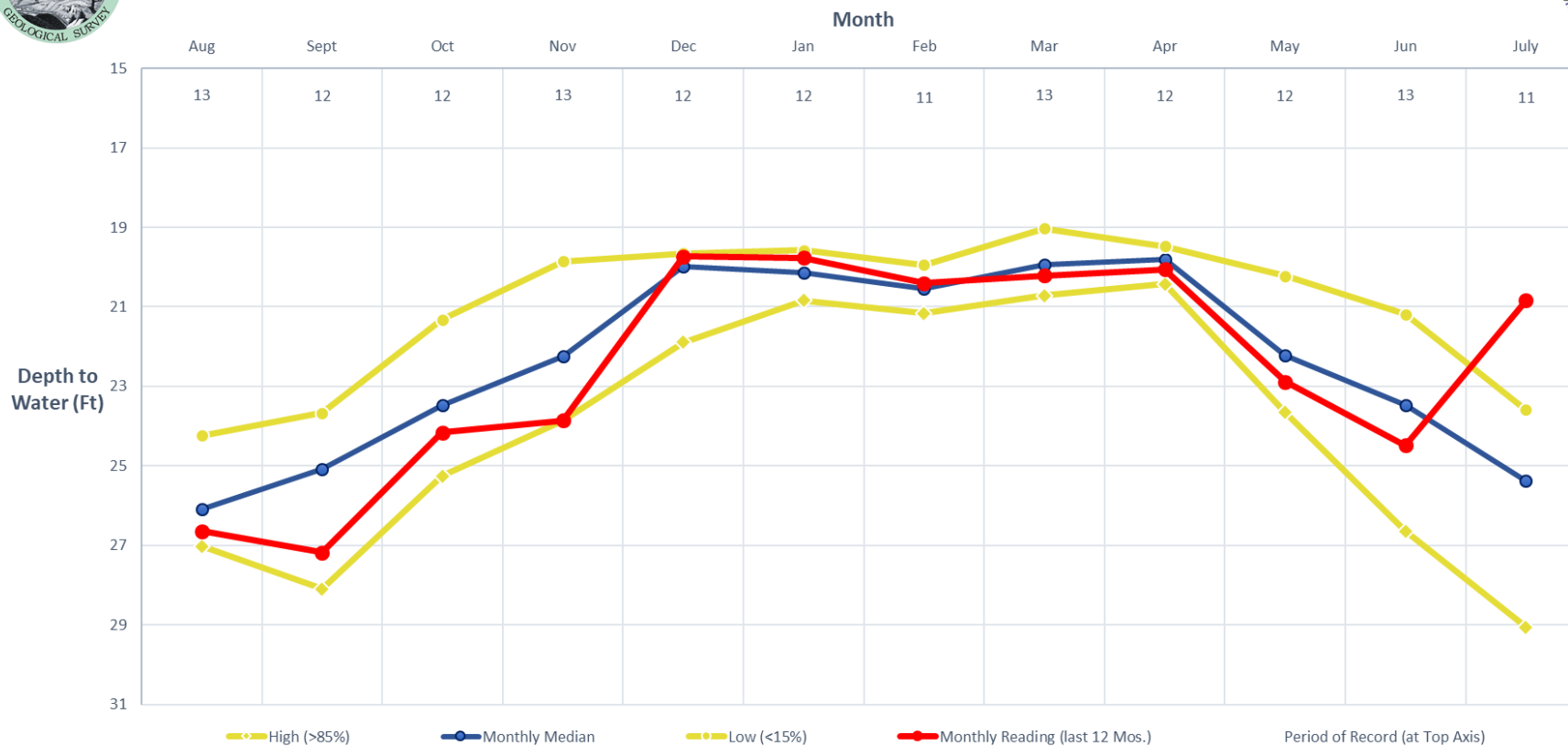
Well CVW-04 - Overburden Well Concord, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



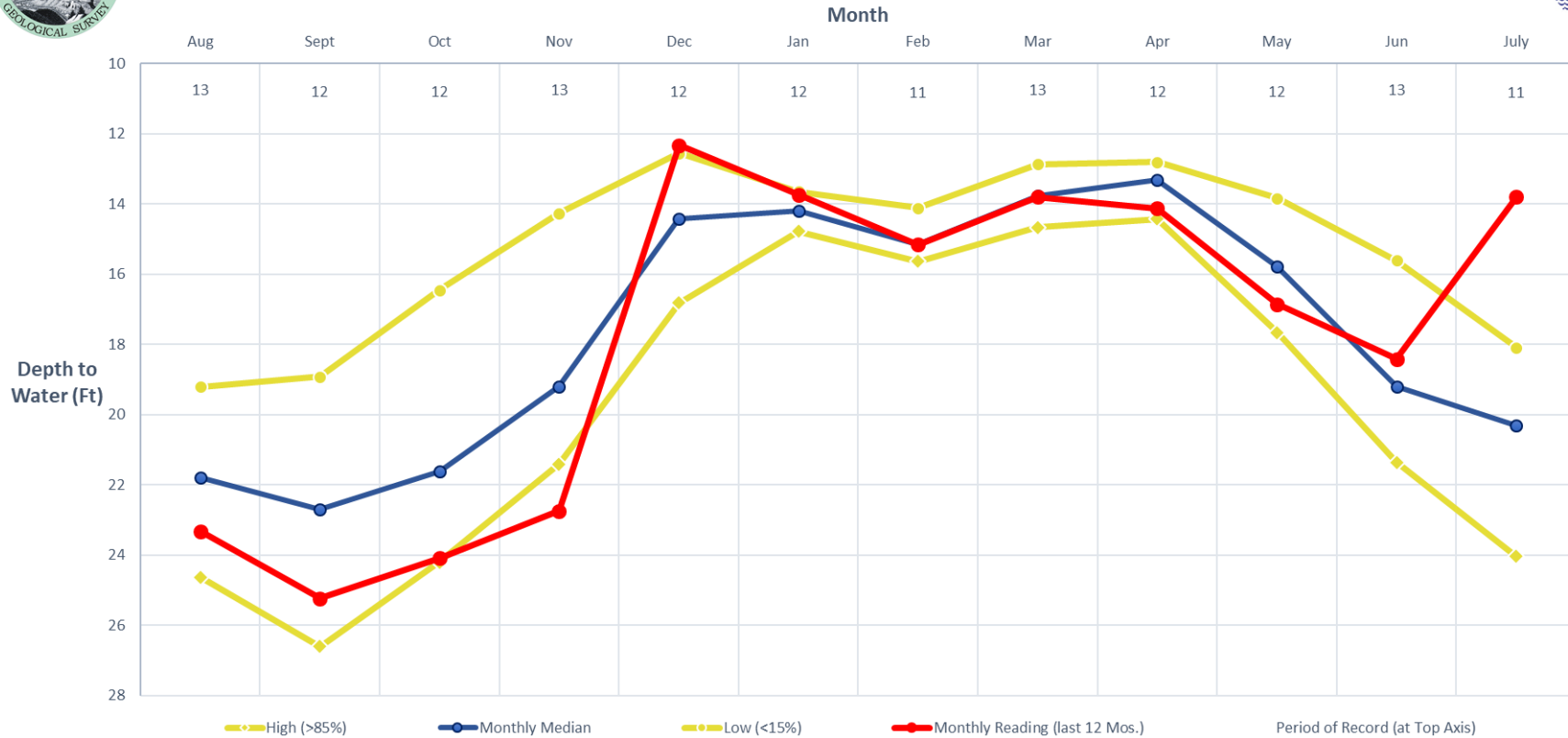
Well CVWB-01 - Deep Bedrock Well Concord, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



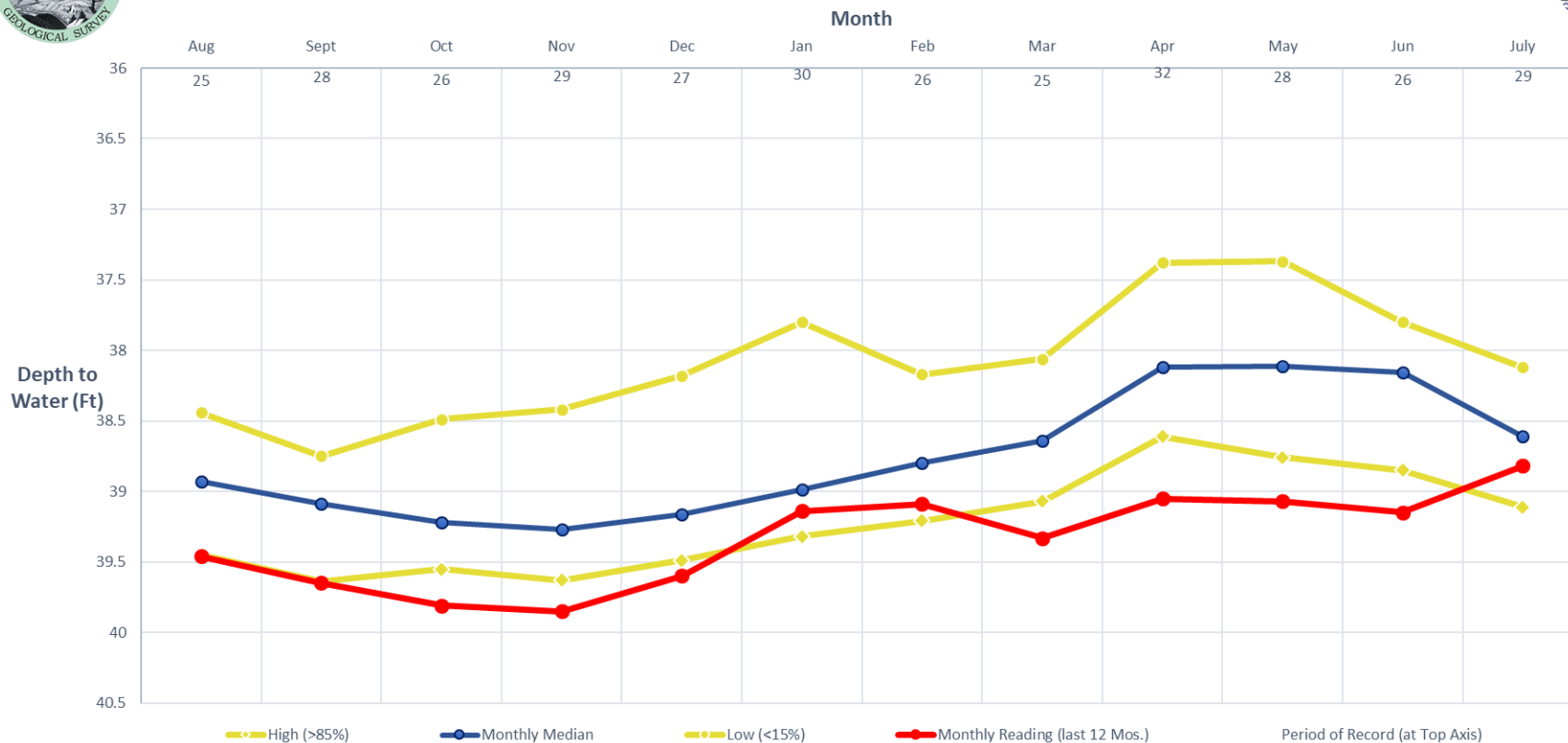
Well CVWB-02 - Shallow Bedrock Well Concord, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



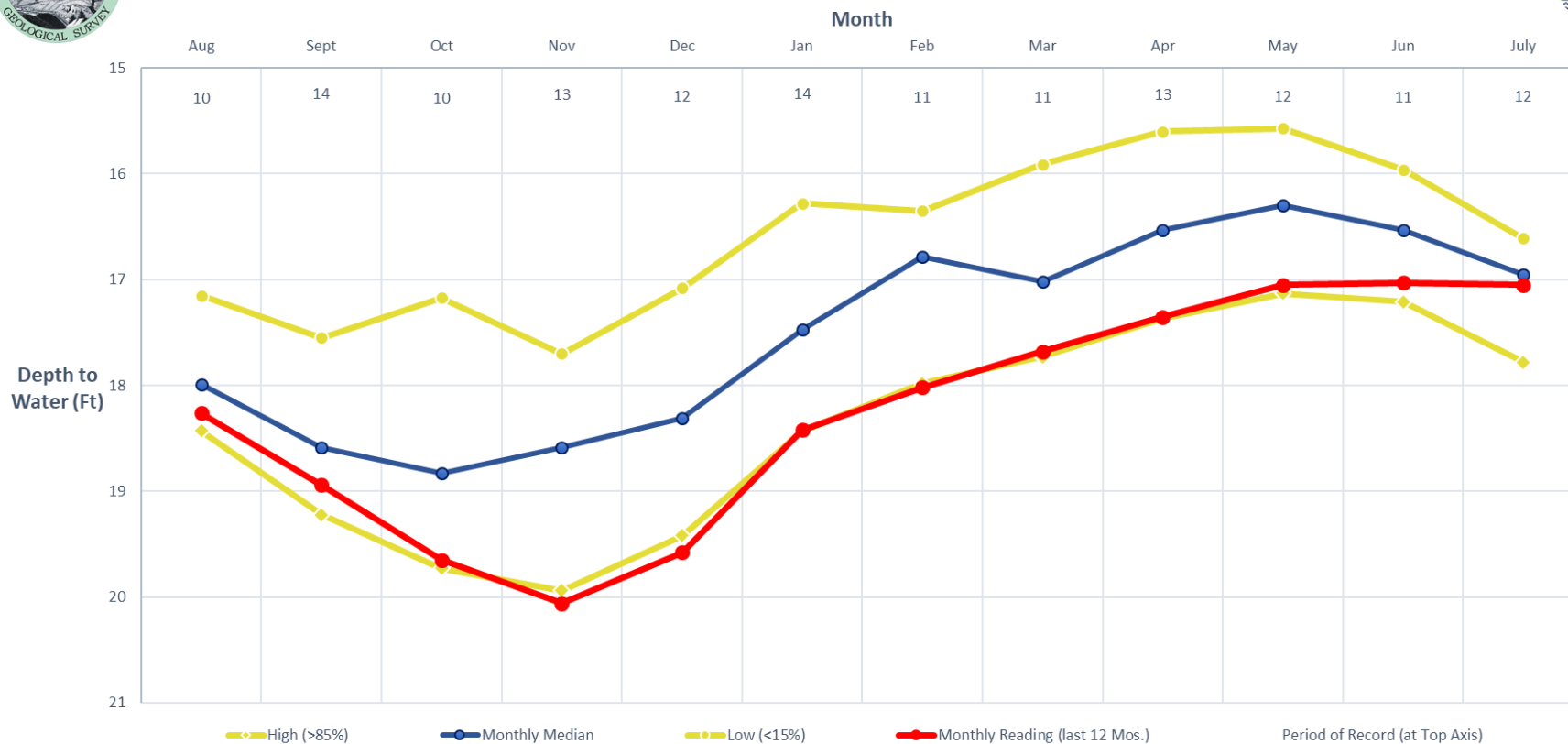
Well DDW-46 - Overburden Well Deerfield, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



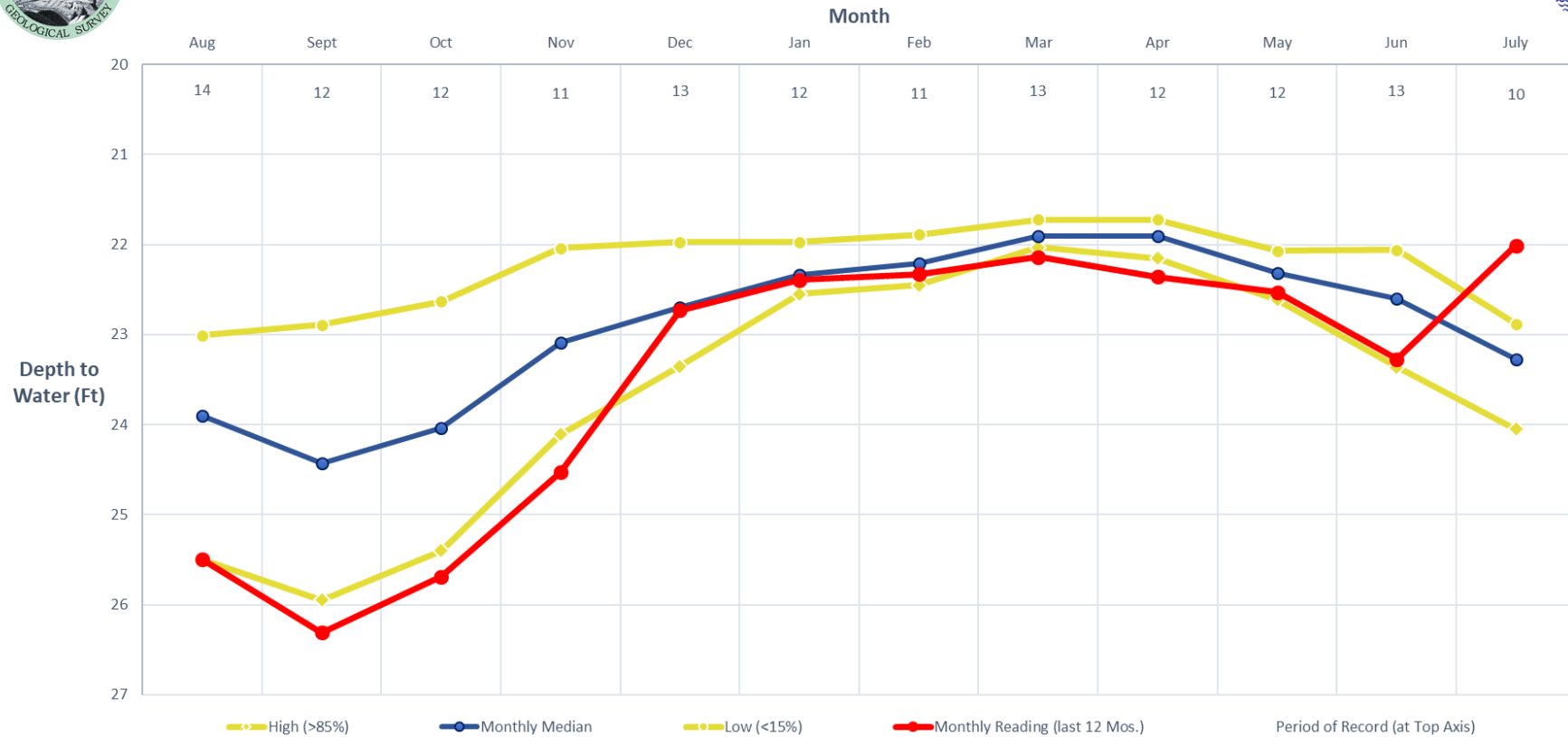
Well DDWB-01 - Bedrock Well Deerfield, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



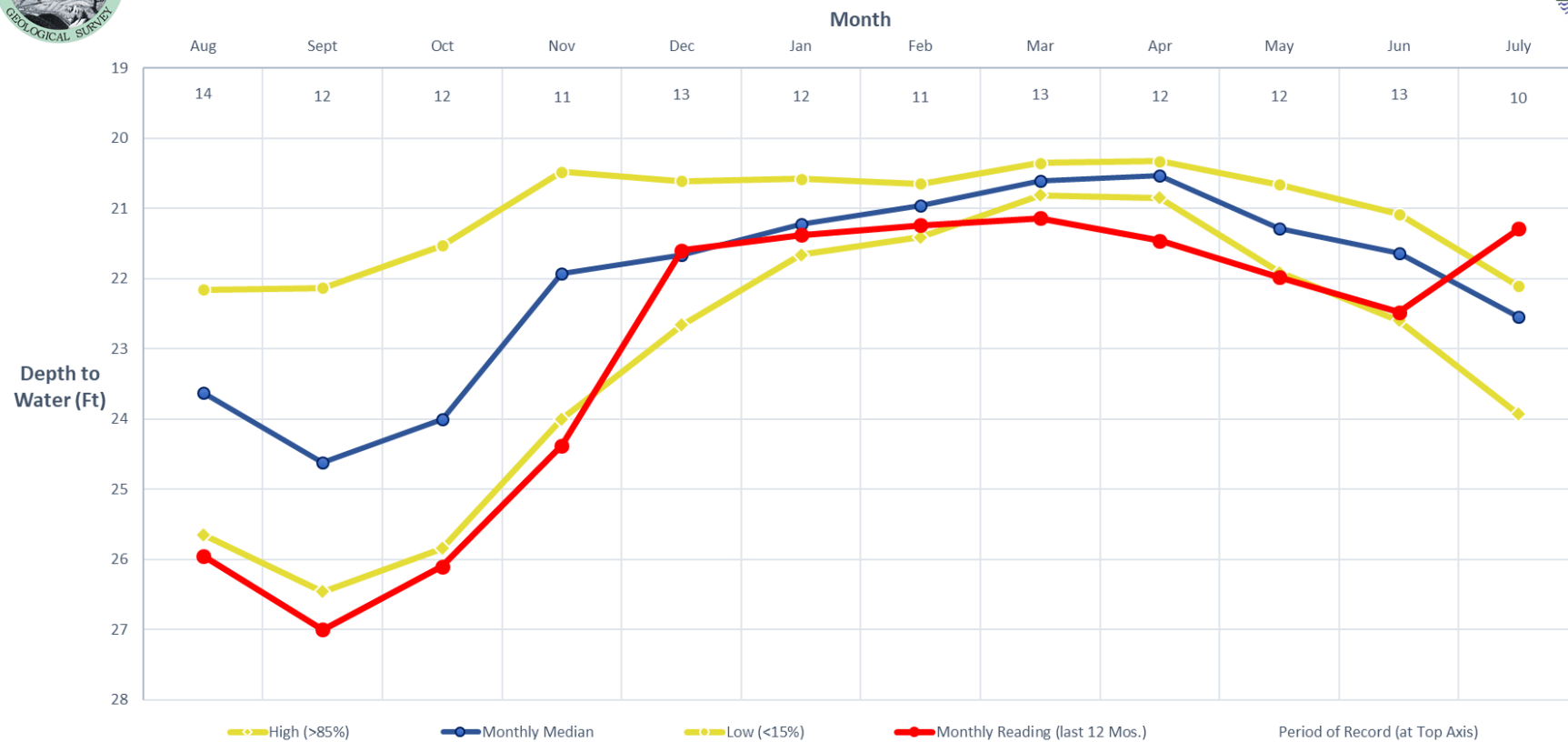
Well EAWB-01 - Deep Bedrock Well East Kingston, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



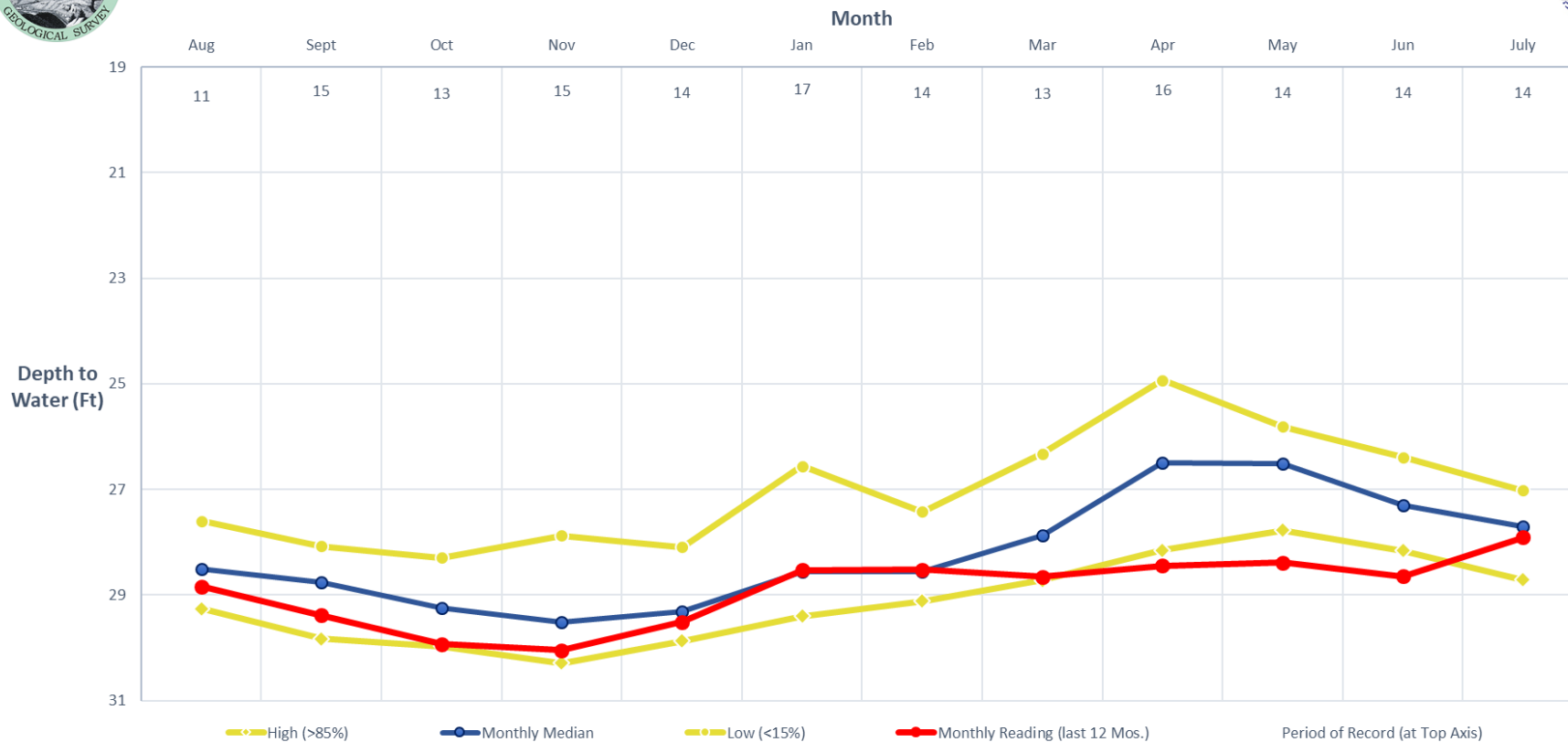
Well EAWB-02 - Shallow Bedrock Well East Kingston, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



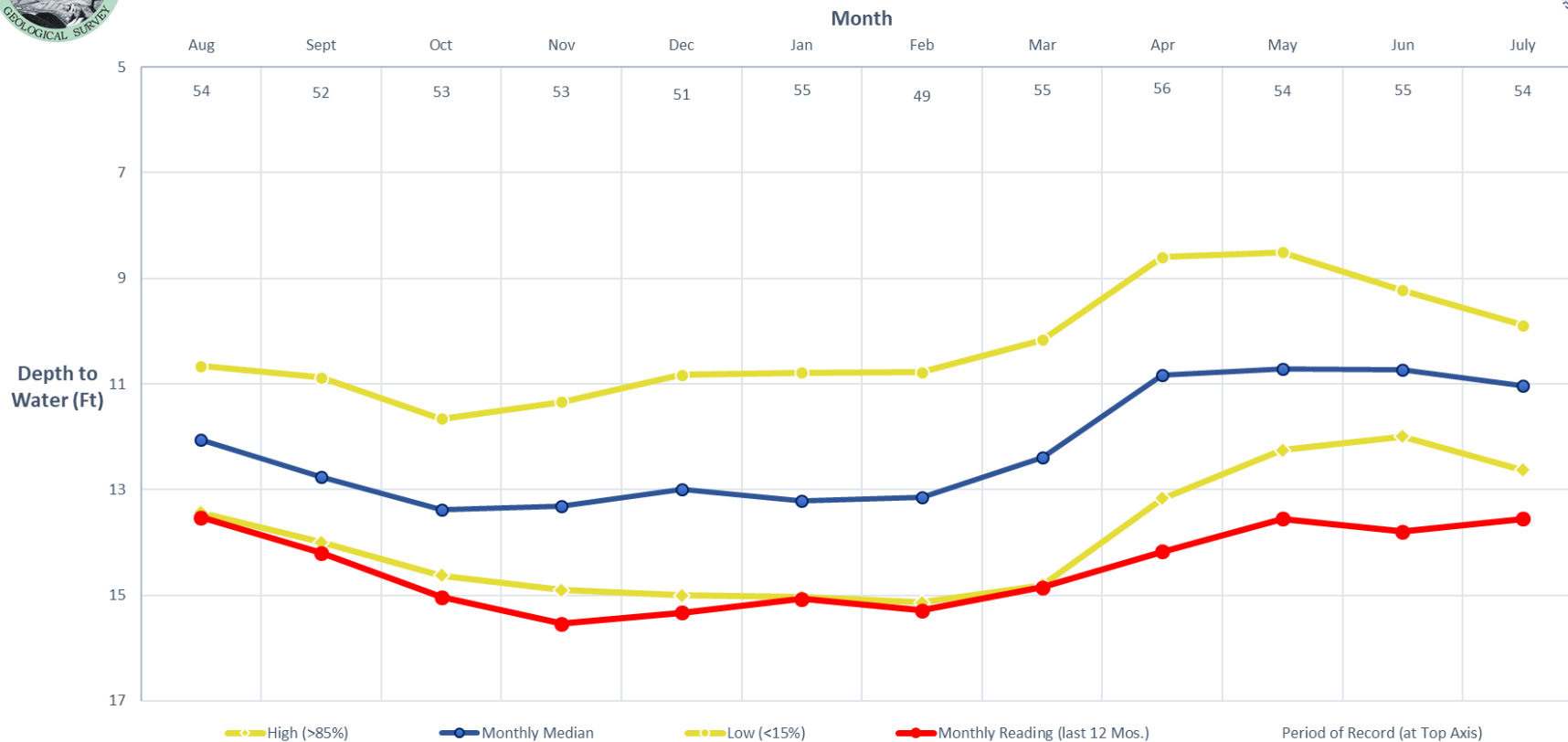
Well EPW-90 - Overburden Well Epping, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



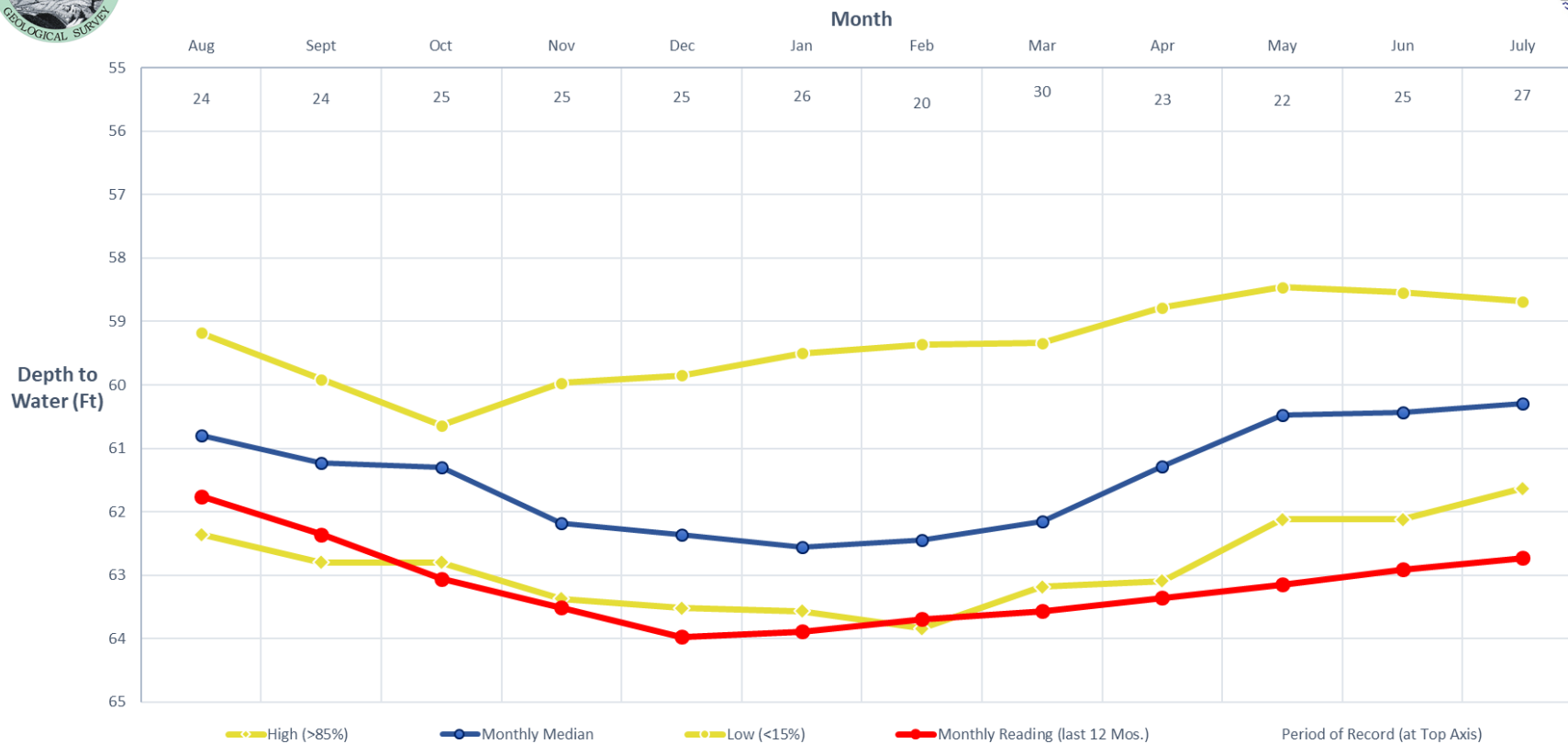
Well FKW-01 - Overburden Well Franklin, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



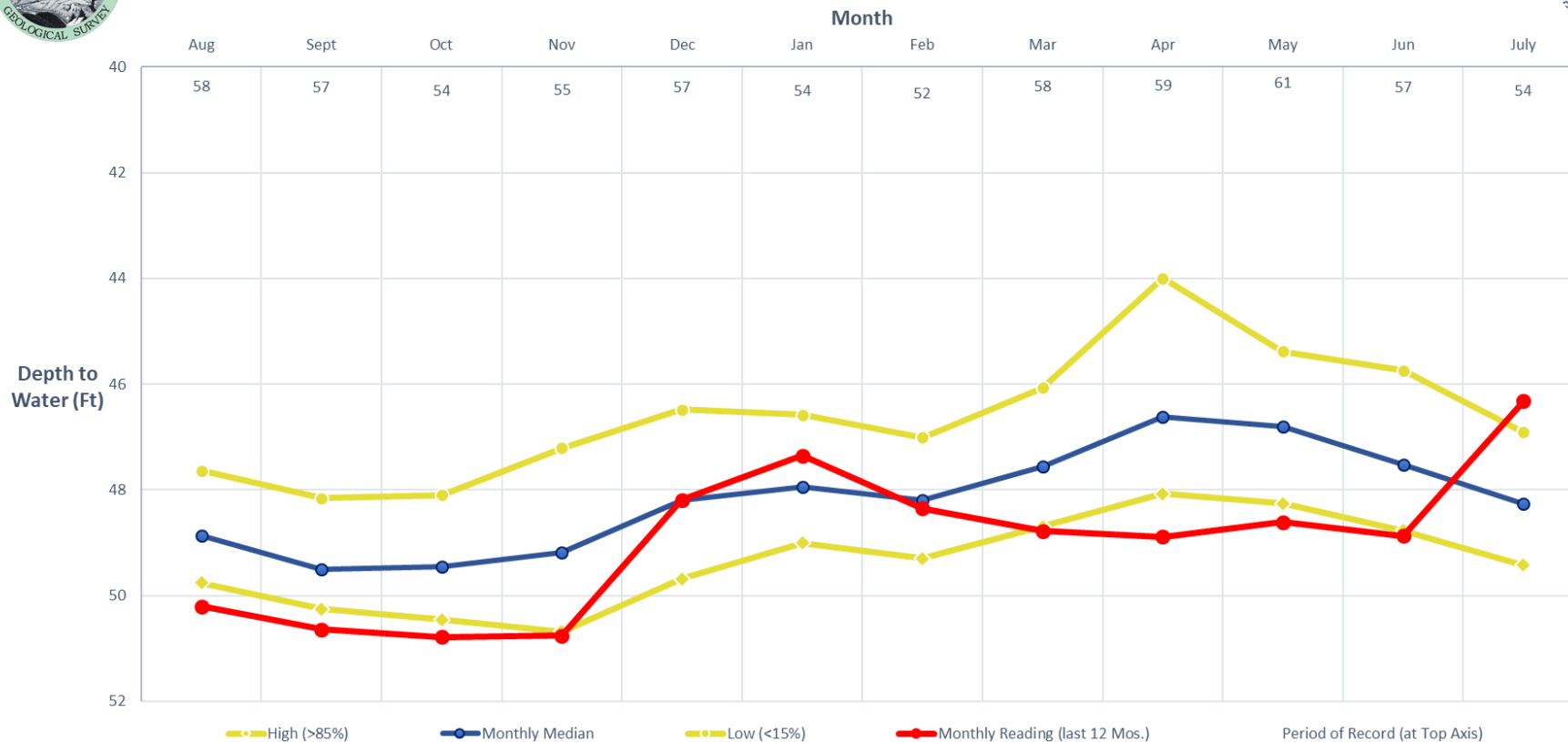
Well GSW-75 - Overburden Well Greenfield, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



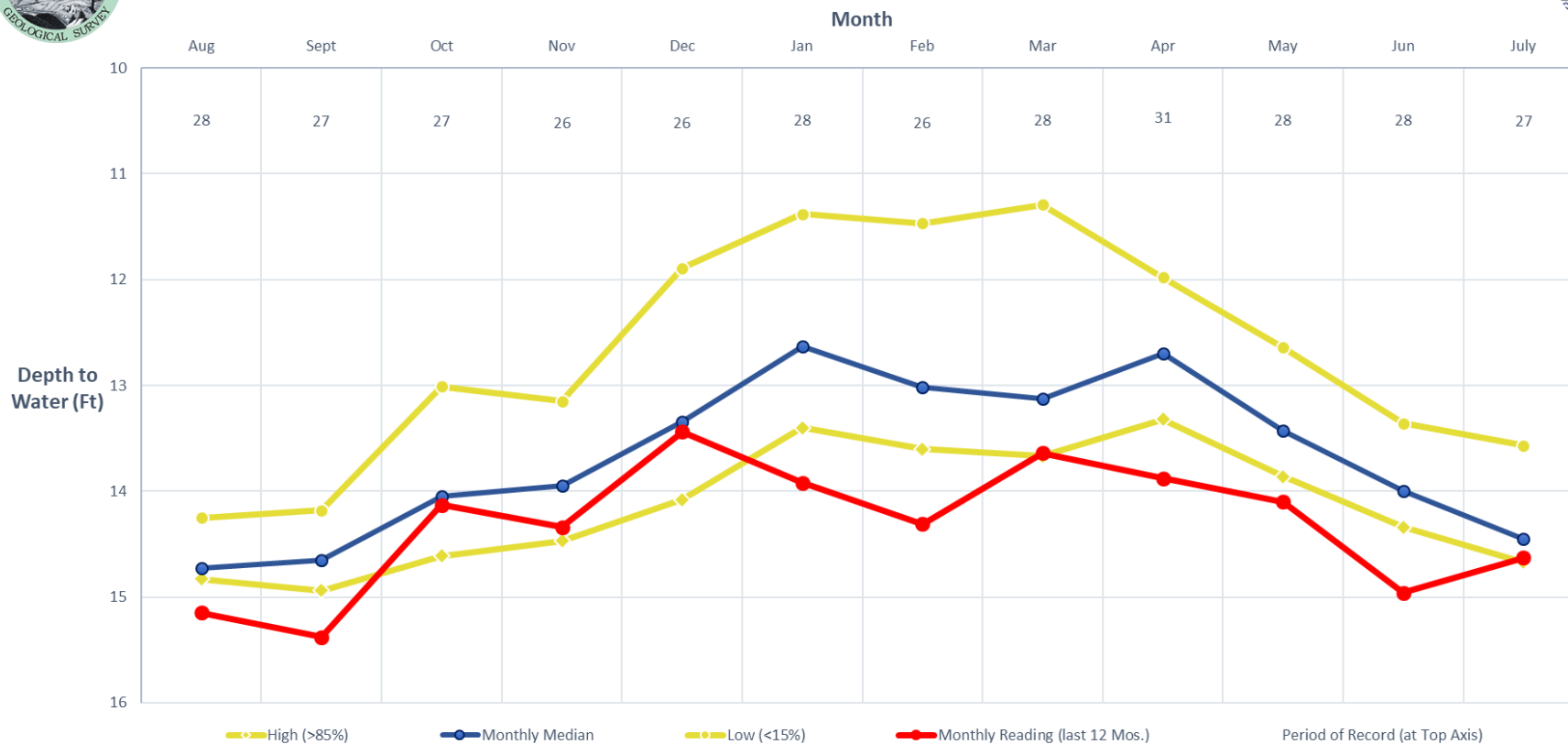
Well HTW-05 - Bedrock Well Hooksett, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



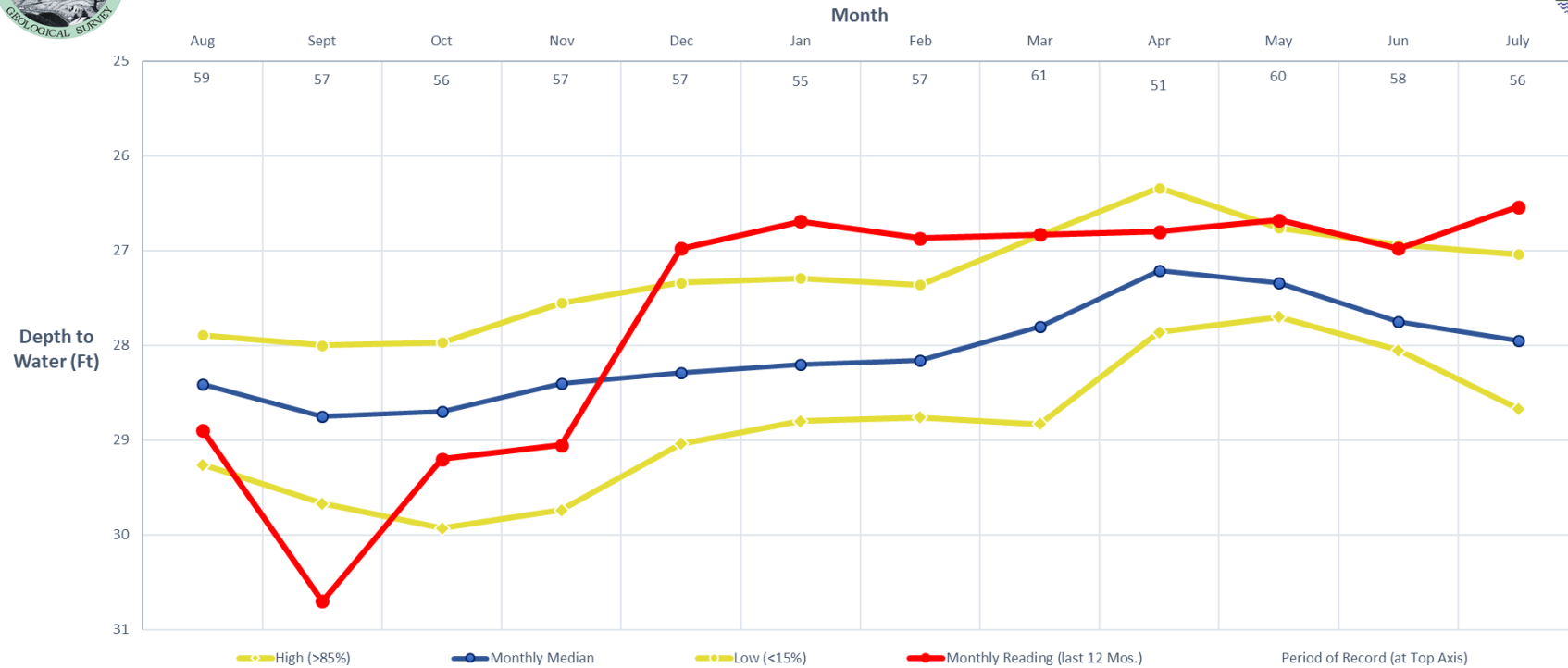
Well LLW-19 - Overburden Well Lisbon, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



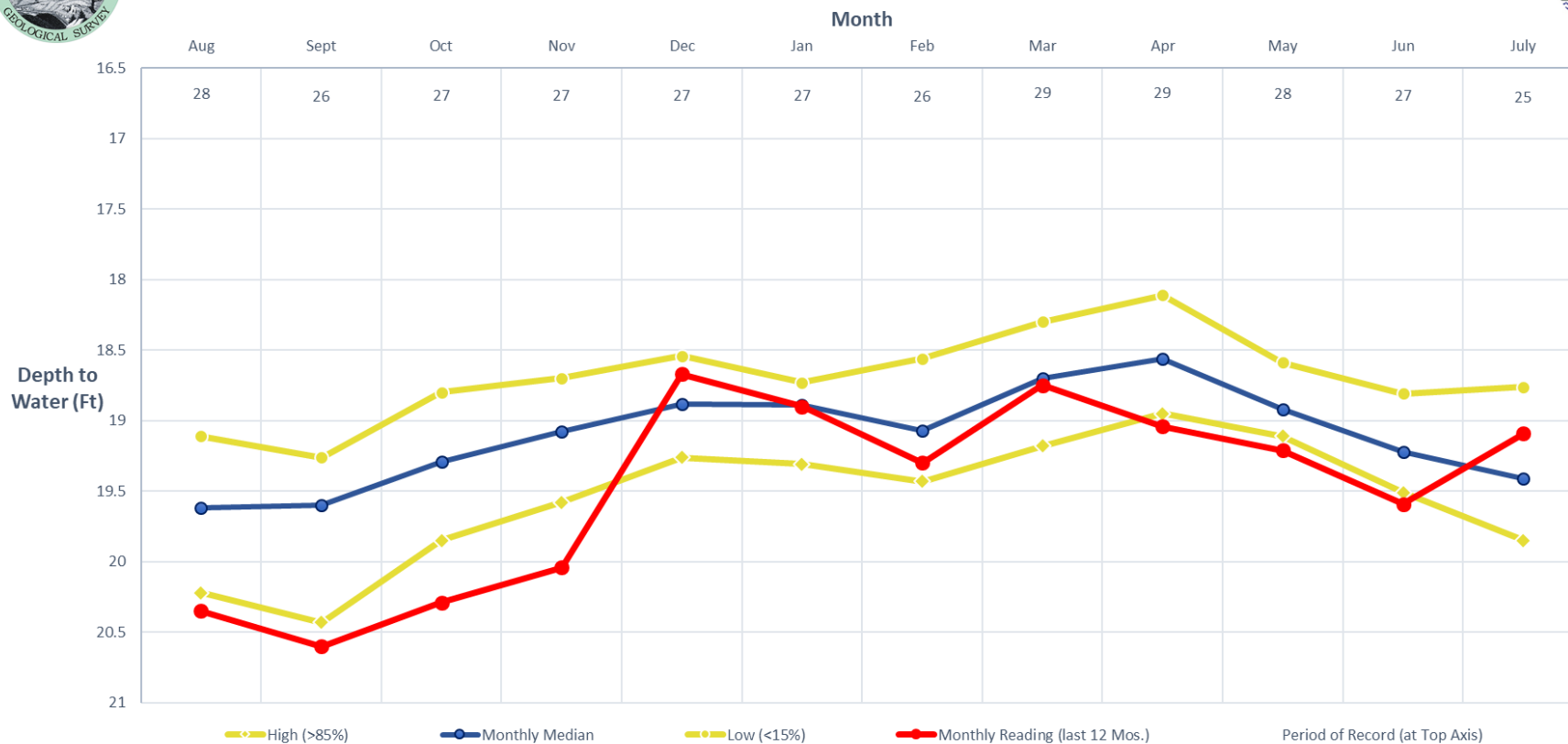
Well NAW-218 - Overburden Well Nashua, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



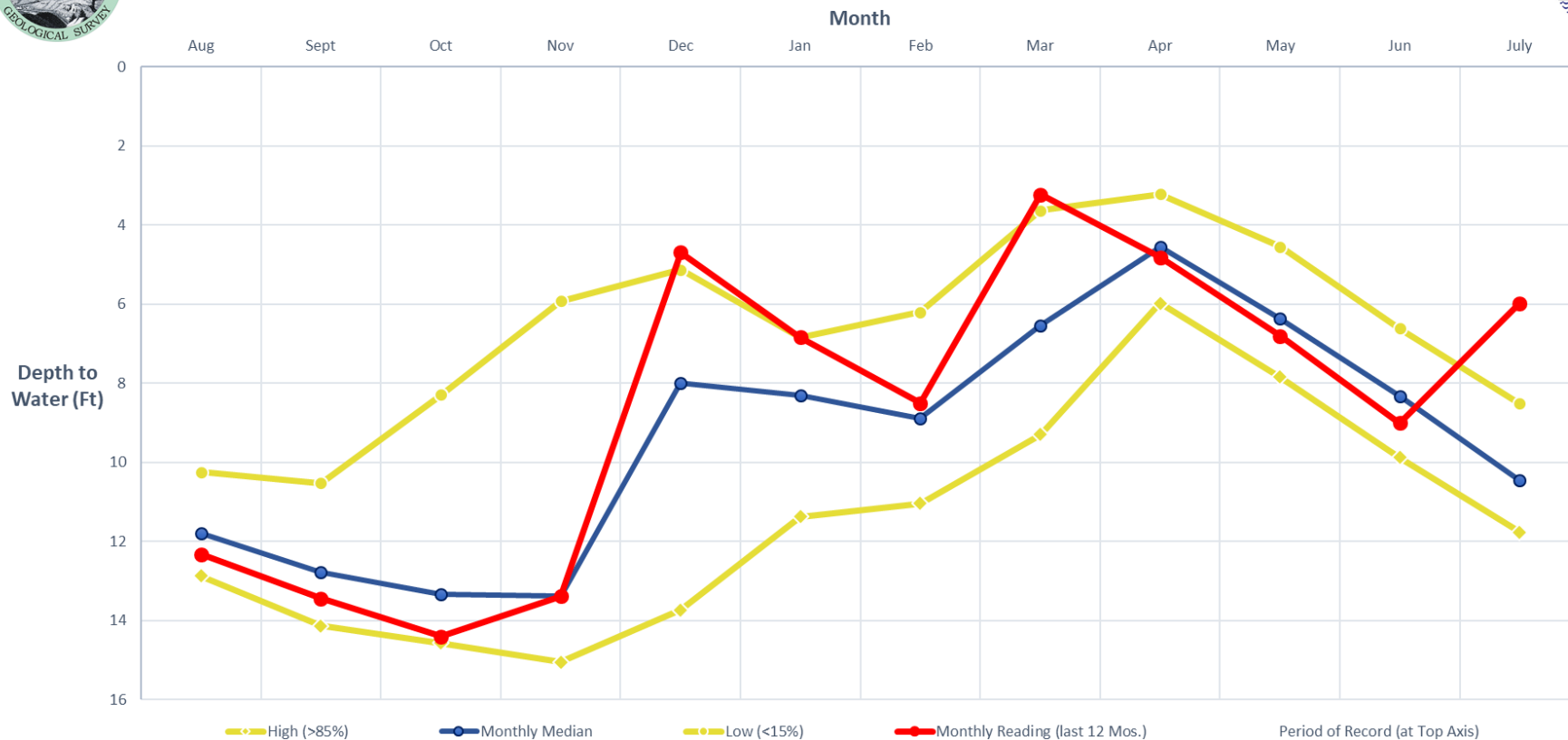
Well NFW-53 - Overburden Well New Durham, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



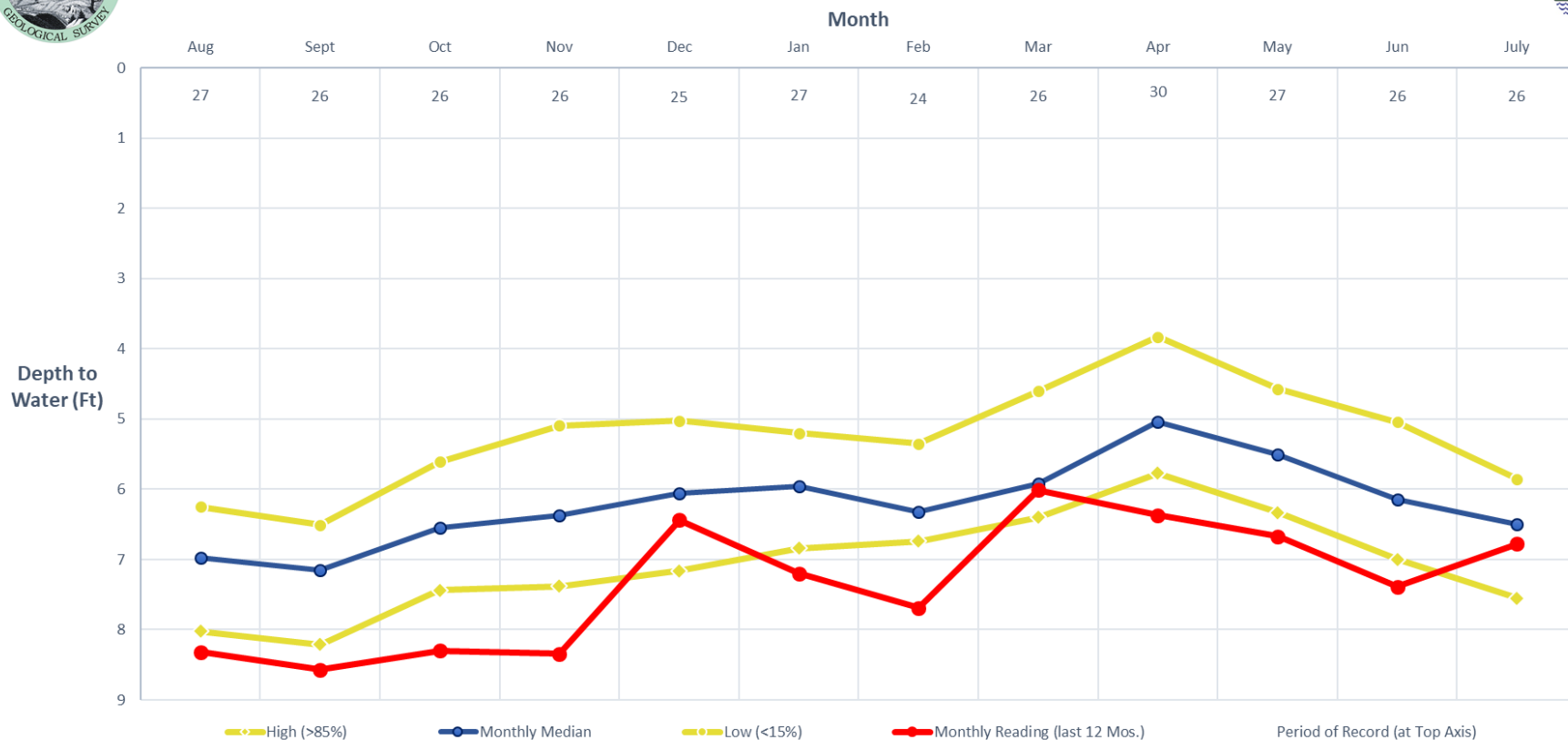
Well NLW-01 - Overburden Well New London, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



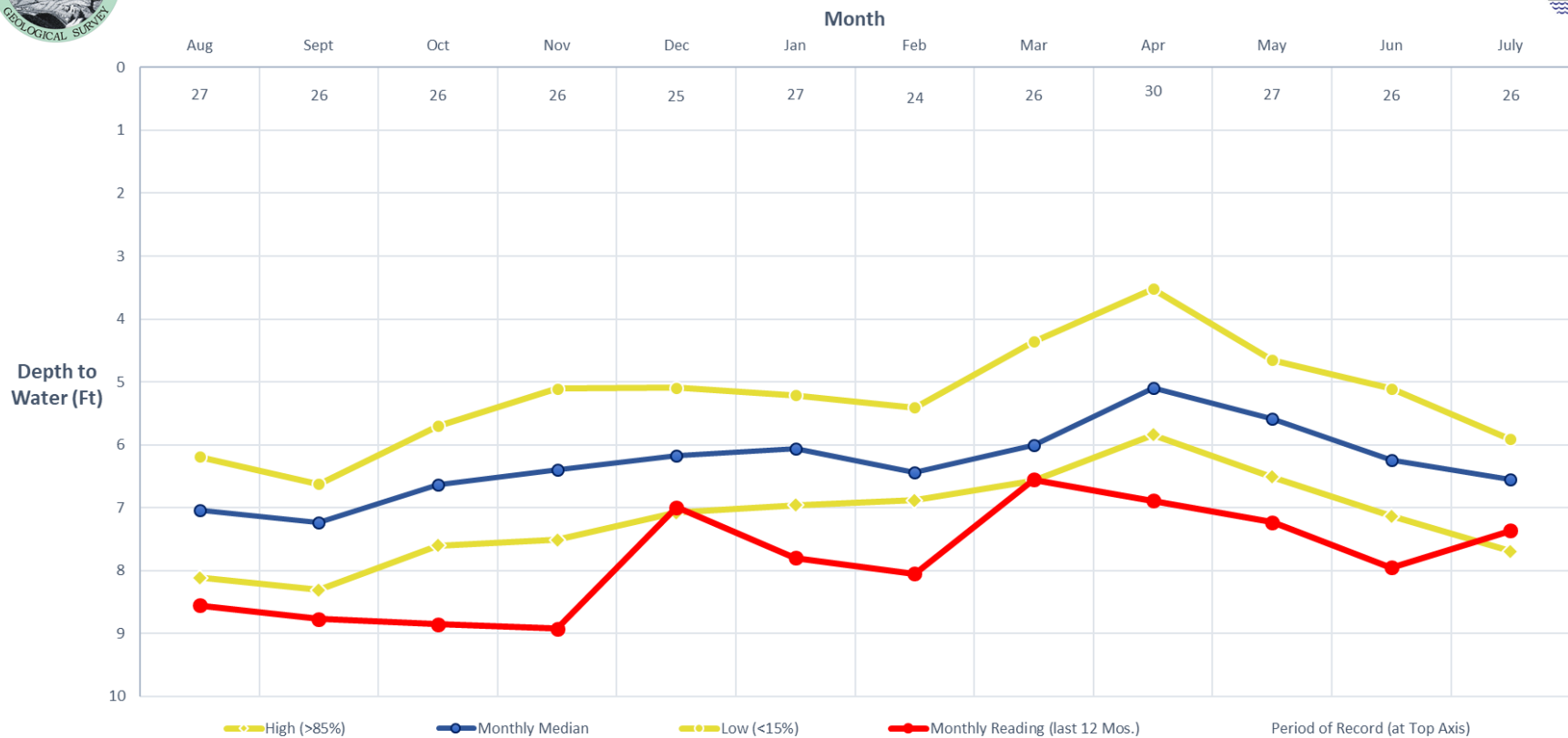
Well NPW-03 - Deep Overburden Well Newport, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



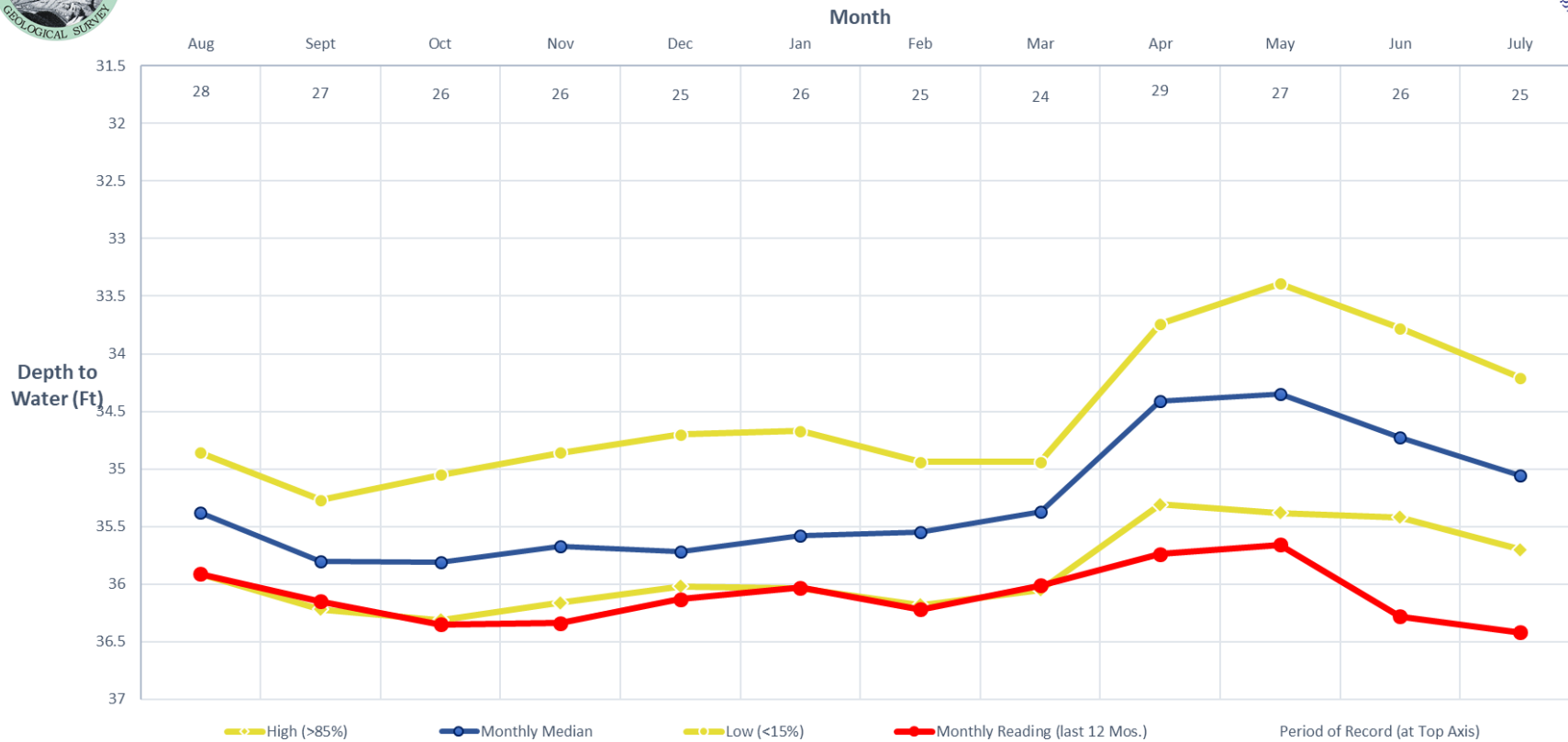
Well NPW-06 - Shallow Overburden Well Newport, NH Groundwater Levels and Statistics* for Previous 12 Months



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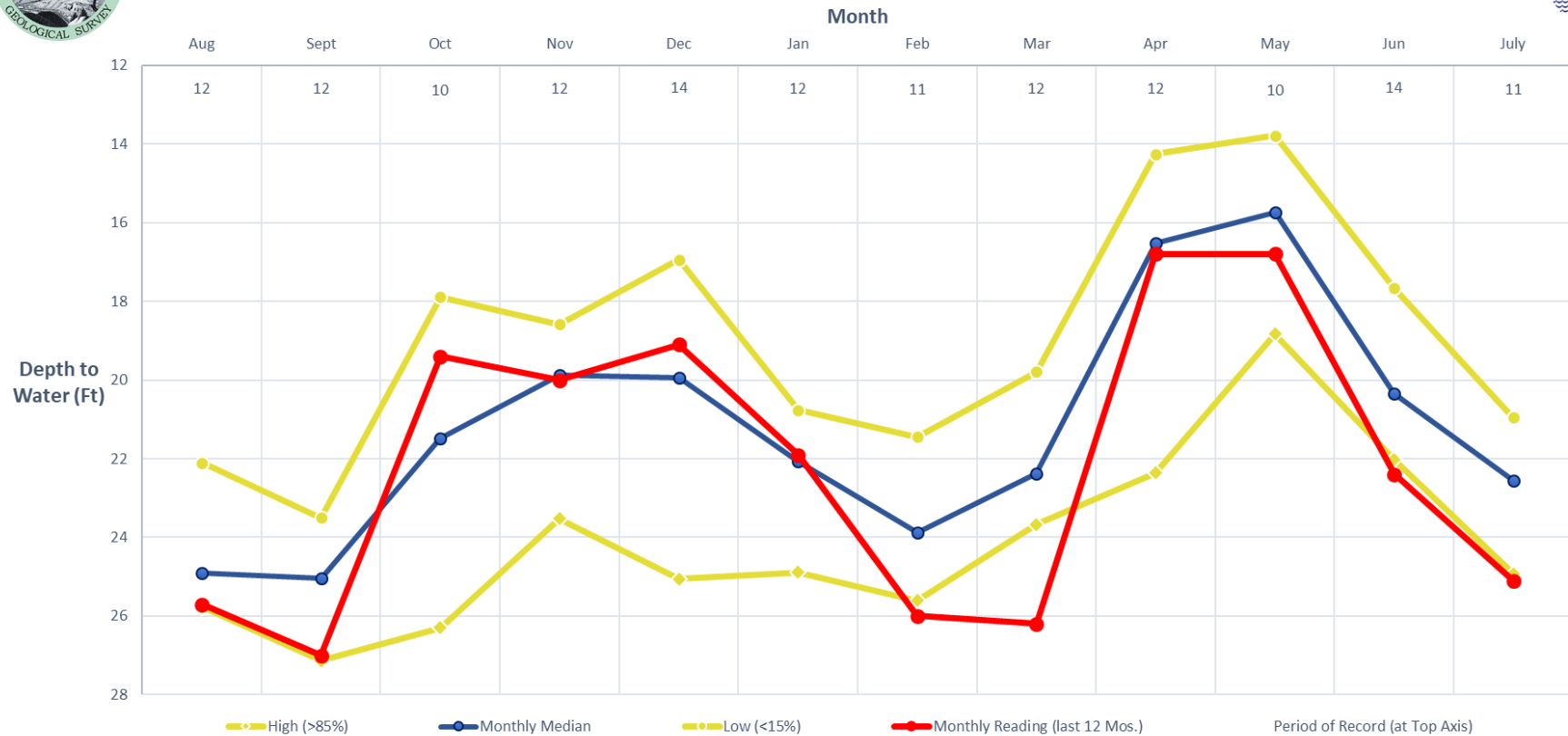
Well OXW-38 - Overburden Well Ossipee, NH Groundwater Levels and Statistics* for Previous 12 Months



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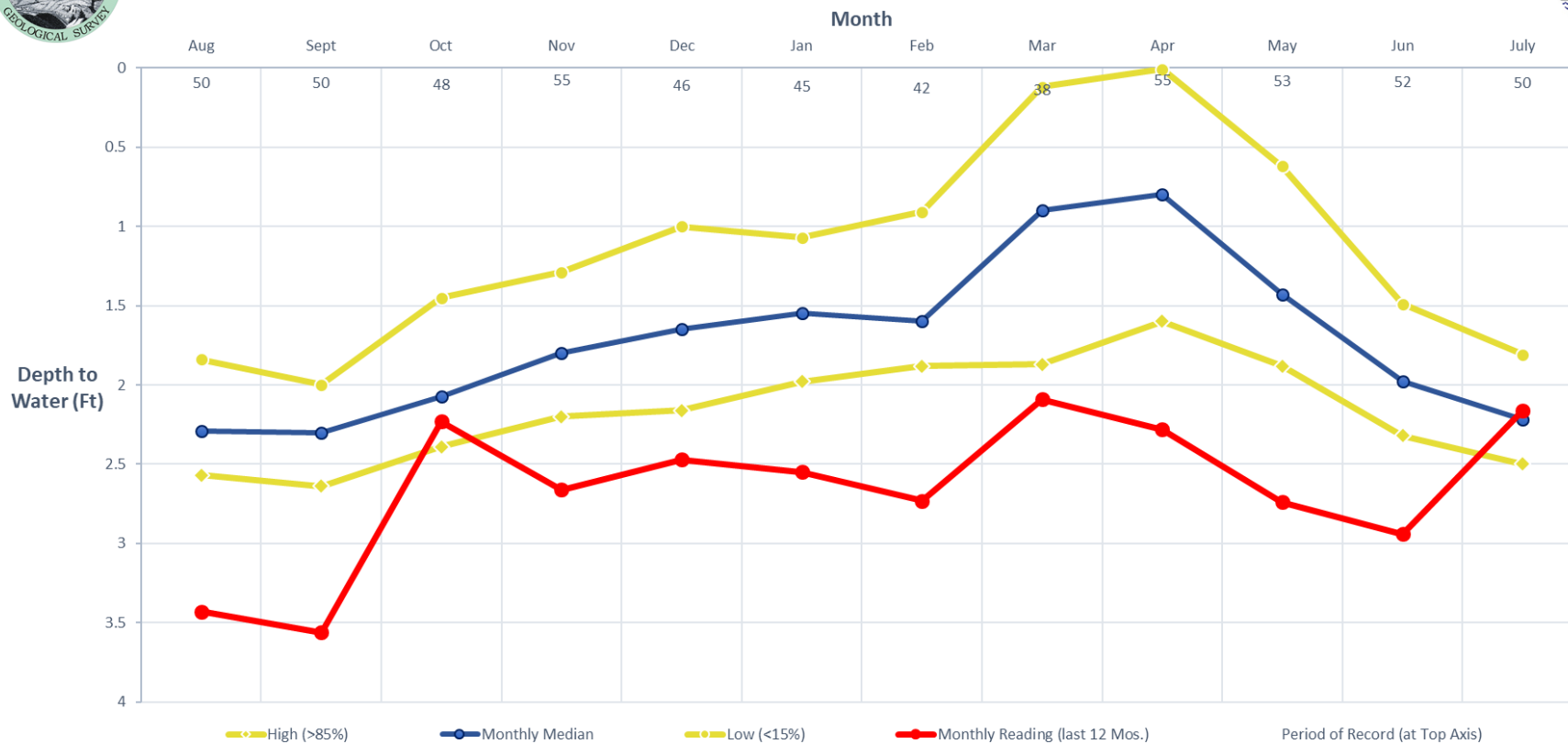
Well SOWB-02 - Shallow Bedrock Well Stewartstown, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.



Well LCW-01 - Overburden Well Lancaster, NH Groundwater Levels and Statistics* for Previous 12 Months



*Statistics are calculated from the number of measurements (period of record) collected at this well.